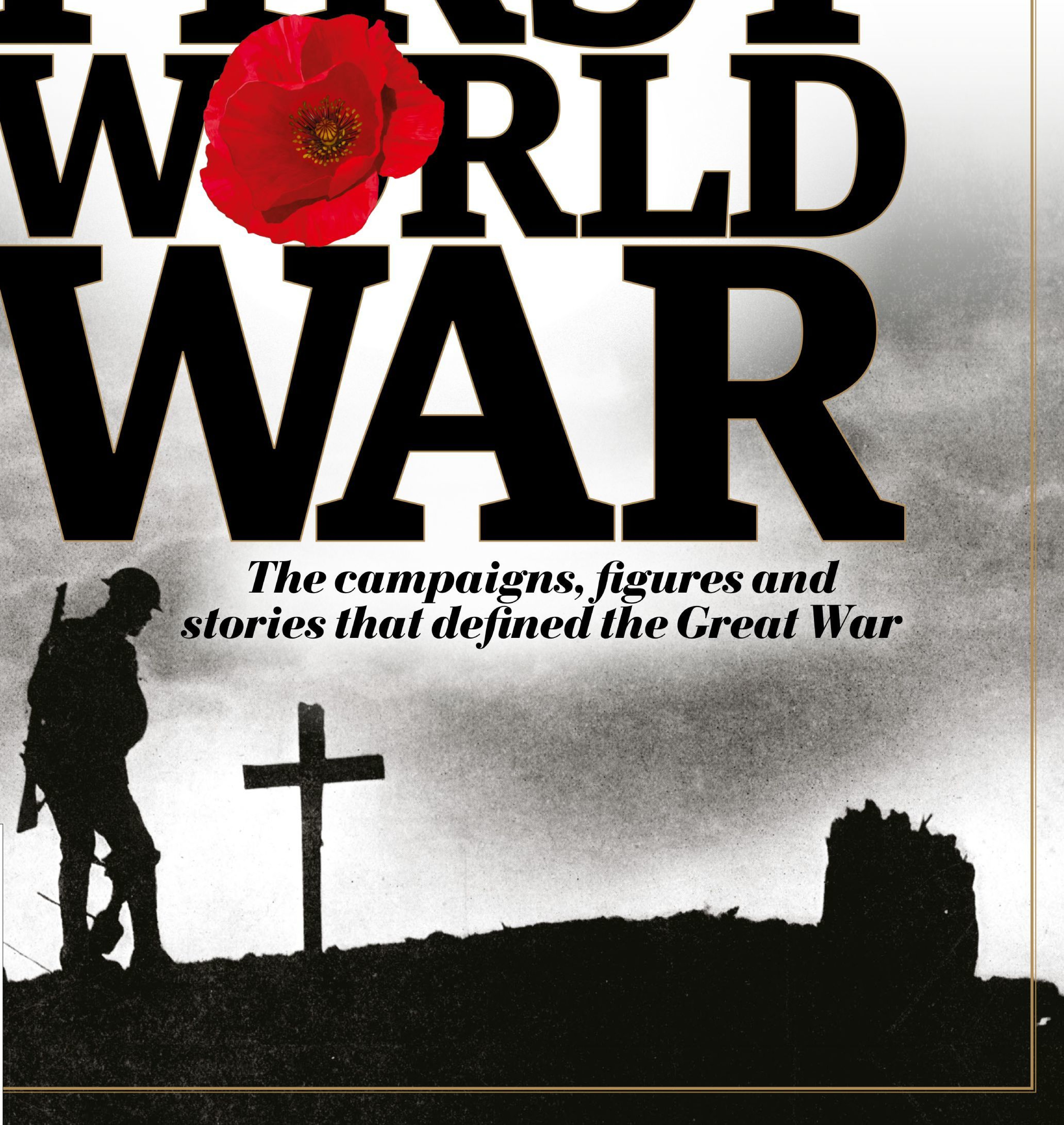
NEW

STORY OF THE FIRST WORLD WAR

The campaigns, figures and stories that defined the Great War



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ALL ABOUT HISTORY

STORY OF THE FIRST WORLD WAR

The First World War, also known as the Great War, was the first industrialised conflict to spread around the world, with over 30 nations declaring war throughout its four year duration. It was a war of and against people, with men volunteering and being conscripted all over the world and civilians at home contributing to industry and agriculture to fill the voids they left. Despite the countless deaths in the trenches, at sea and in the air, it was a war of innovation. Military strategies, transport, and weaponry all developed and progressed as a result. In this new edition of the All About History Story of the First World War, you will explore the significant battles, poignant events and influential figures that contributed to World War I. Take a look inside to discover why and how it began, the destruction that it caused to both land and life, and the legacy that was left after those last shots had been fired.

FUTURE

STORY OF THE FIRST WORLD WAR

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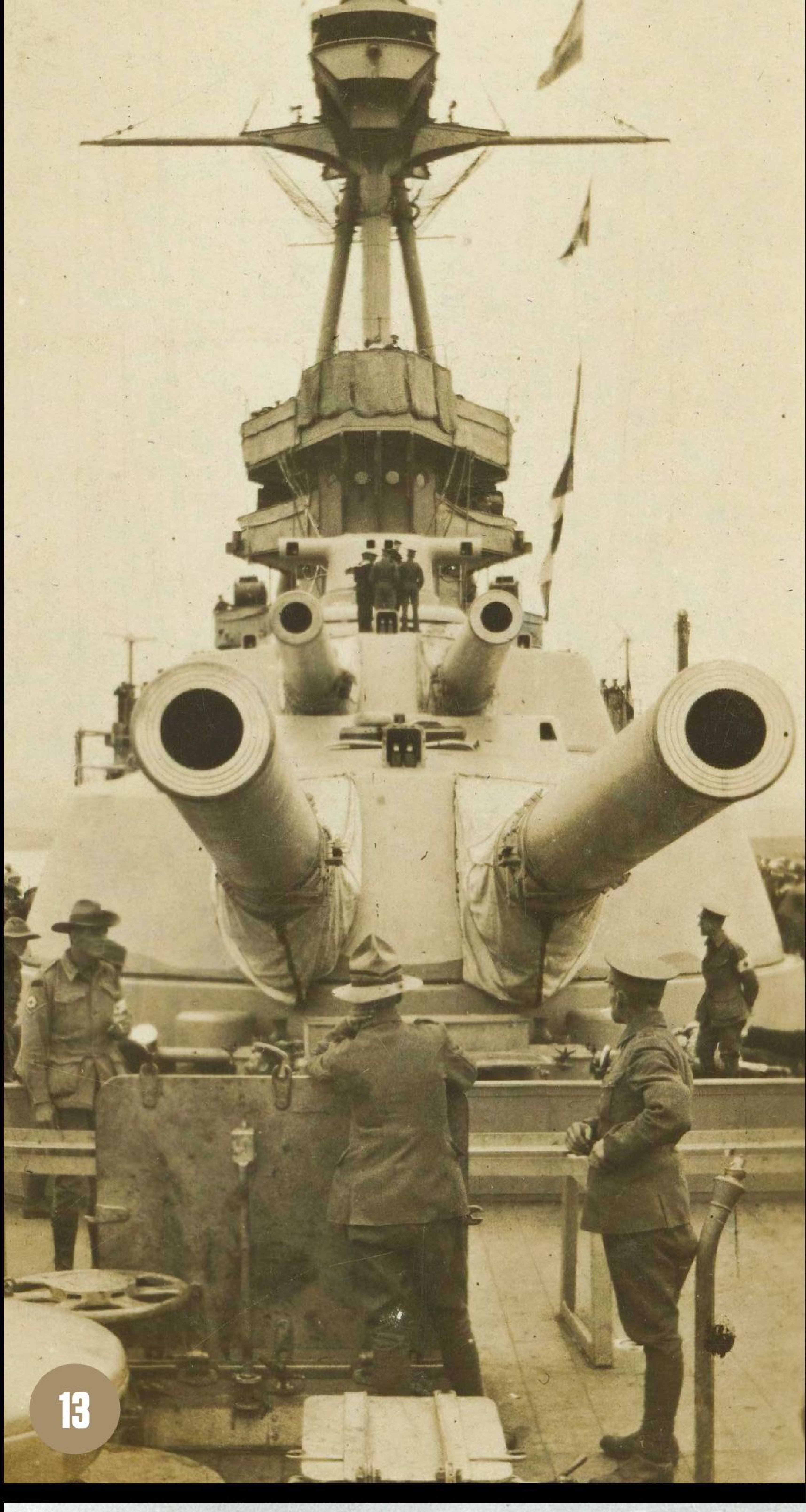
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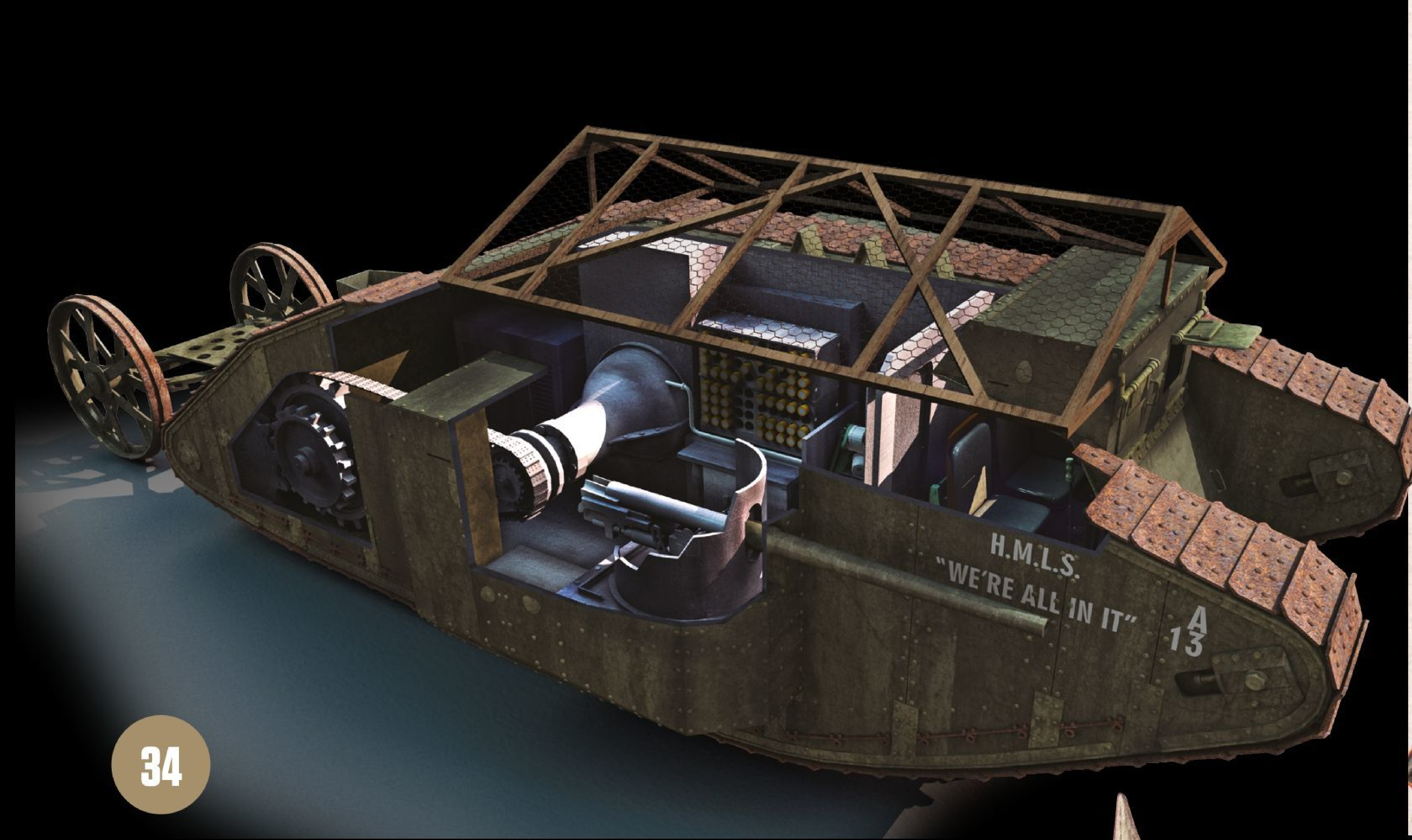
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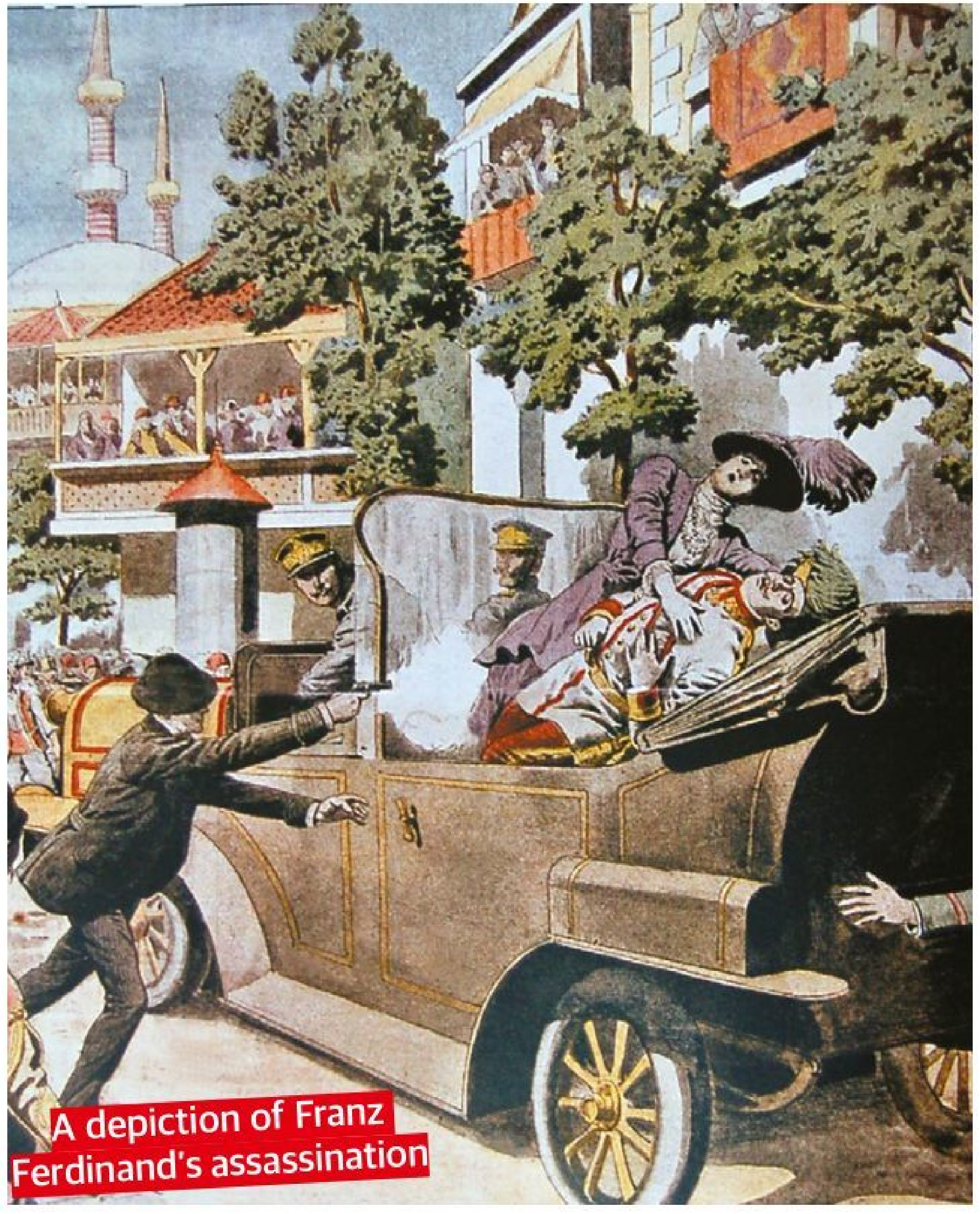
Far from ending all wars, many overlooked conflicts continued to rage across the globe after the World War I

A history of WWI

THE ASSASSINATION OF FRANZ FERDINAND

BOSNIA AND HERZEGOVINA 28 JUNE 1914

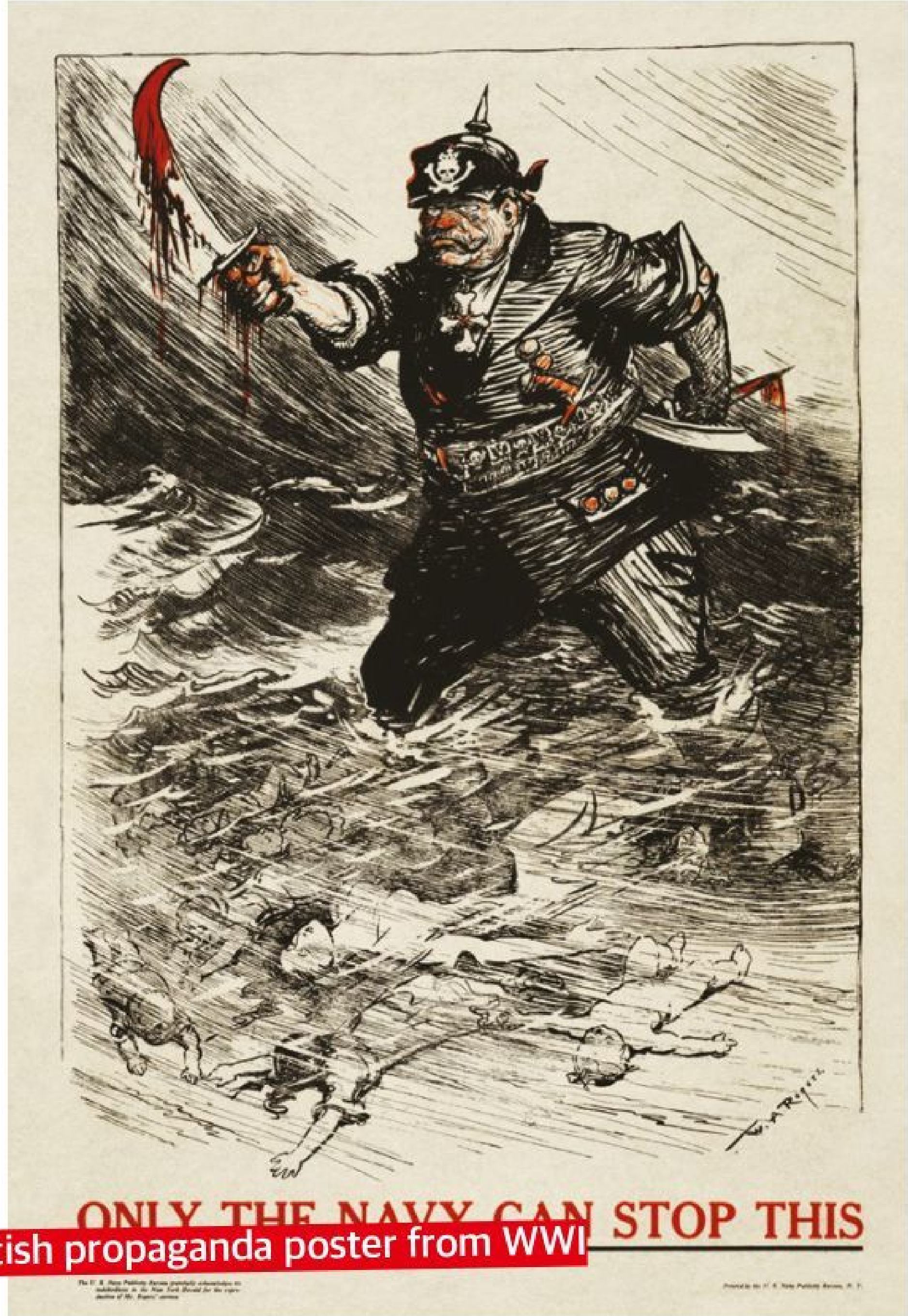
After Bosnia and Herzegovina were annexed by the Austro-Hungarian Empire, Franz Ferdinand, the heir of the empire, travelled to Sarajevo to inspect the army. A Serbian nationalist group, called The Black Hand, conspired to supply seven young students with weapons for an assassination of Ferdinand. After a failed assassination attempt, the Archduke decided to return home via a different route, but nobody told the driver. As the car stopped to turn, Gavrilo Princip, one of the conspirators, spotted the car and shot. By 11.30am, Prince Ferdinand had bled to death.


A depiction of Franz Ferdinand's assassination

German U-boat Campaign

ATLANTIC OCEAN, NORTH SEA AND MEDITERRANEAN SEA 28 JULY 1914 - 11 NOVEMBER 1918

The U-boat Campaign was an effort by the German military to destroy the trade routes of the Entente Powers. With the British Empire relying heavily on imports for food and supplies, the German U-boats were commanded to sink all Allied or neutral ships on sight. This led to the sinking of almost 5,000 ships and pushed Prime Minister Lloyd George to order an armed navy convoy for all ships carrying provisions, equipment or weapons to the British Isles.


ONLY THE NAVY CAN STOP THIS
A British propaganda poster from WWI

WWI timeline

Austria declares war
Blaming the Serbian government for Franz Ferdinand's assassination, Austria-Hungary formally declares war on Serbia.
28 June 1914

Franz Ferdinand

1914

Germany declares war on Russia
Germany offers support to Austro-Hungarians and Russia, allied with Serbia, mobilises. In response, Germany declares war on Russia.
1 August 1914

Germany invades
Germany declares war on France and implements the Schlieffen Plan, invading Belgium. Britain orders Germany to withdraw.
3 August 1914

A strategic meeting in WWI

Britain declares war on Germany
Germany refuses to withdraw from neutral Belgium and as a result Britain declares war on Germany.
4 August 1914

The Battle of Tannenberg
The Russian army march into Prussia, but struggle to get supplies through, suffering a crushing defeat to the Germans.
26 August 1914

Hindenburg at Tannenfeld

Turkey joins the war
Turkey enters the war on the side of the Germans and contributes forces to a naval bombardment of Russia.
29 October 1914

Turkish leader Kemal Pasha

1915

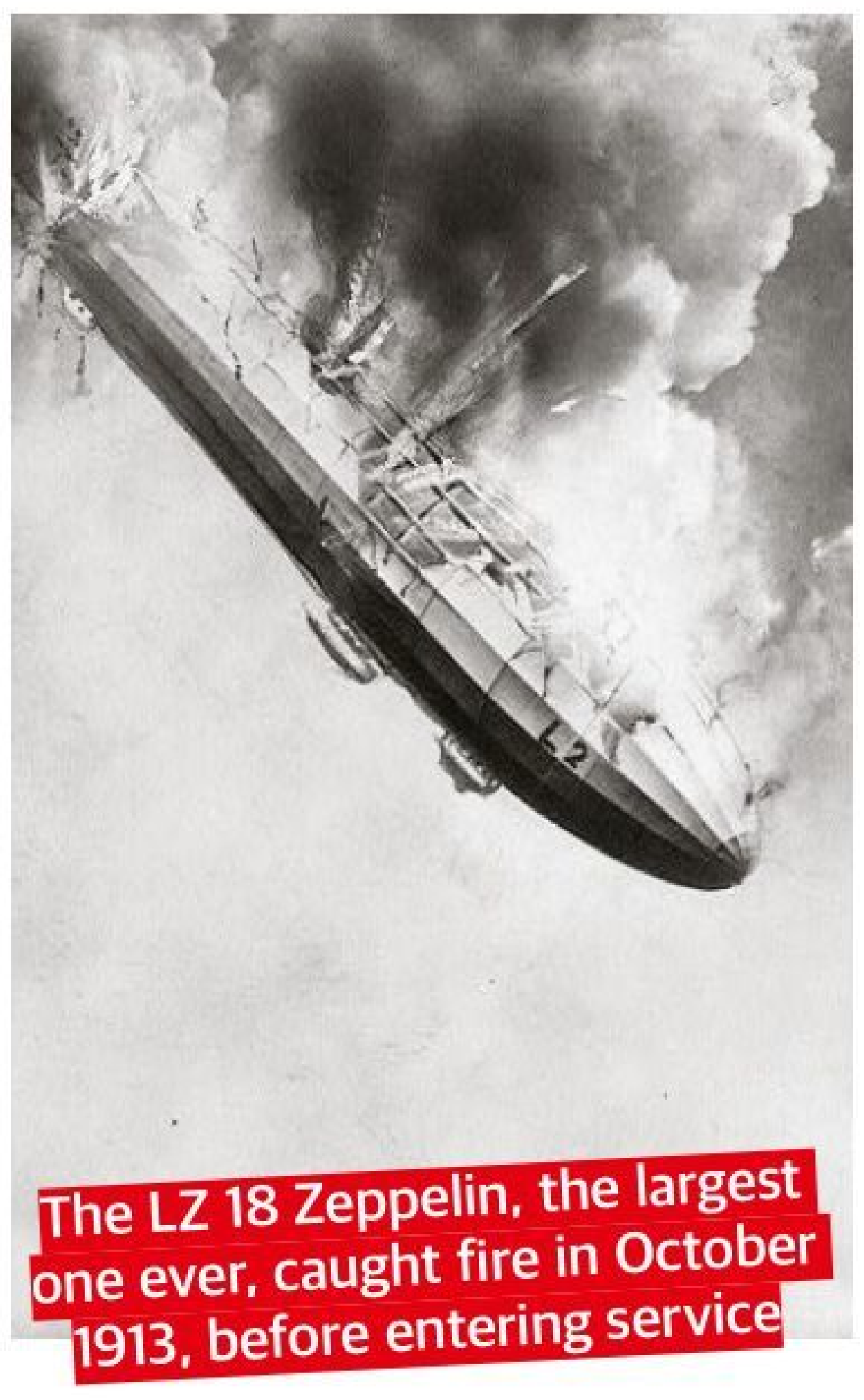
The sinking of the Lusitania
RMS Lusitania, a ship carrying 139 American passengers, is sunk in the German U-boat Campaign, prompting furious protests from the US.
7 May 1915

RMS Lusitania

Second Battle of Ypres
Germany unleashes poison gas en masse for the first time – banned under the Hague Convention – claiming thousands of casualties. The Germans were surprised by the effectiveness of the new weapon and thus didn't fully exploit the situation.
21 April - 25 May 1915

Churchill resigns
In response to the bloodshed at Gallipoli, Winston Churchill resigns as first lord of the admiralty. He returns to the army as a battalion commander.
May 1915

Germany limits submarines
In an effort to keep the USA out of the war, Kaiser Wilhelm suspends unrestricted submarine warfare.
18 September 1915


The LZ 18 Zeppelin, the largest one ever, caught fire in October 1913, before entering service

The Zeppelin raids

ENGLAND DECEMBER 1914 - AUGUST 1918

Named after its German inventor Ferdinand von Zeppelin, the zeppelin was a balloon-like airship with a covered metal frame used by the German forces throughout the war. These 'blimps' were used for naval reconnaissance but were made infamous for their use in strategic bombing raids against England. Nicknamed 'baby-killers', these airships made 51 bombing raids, killing 557 people and injuring another 1,358, most of whom were civilians. Amassing a total of £1.5 million in damage, the Zeppelin raids finally came to a stop with the introduction of aeroplanes, which could shoot them down with relative ease.

Conditions in WWI trenches were squalid

The Battle of Verdun

FRANCE 21 FEBRUARY - 18 DECEMBER 1916

In response to the increasing threat of German invasion, the French attempted to build an impassable line of sunken forts extending from the Swiss frontier to the French city of Verdun. The Battle of Verdun was a German campaign to 'bleed the French dry.' Germany was successful in claiming the French forts but quickly became distracted by the British attack on the Somme and the Russian offensive in the East, allowing France to reclaim the forts. Nine months later, with enormous casualties on both sides, neither force had gained a real strategic advantage.

The Battle of Gallipoli

SANJAK OF GELIBOLU 25 APRIL 1915 - 9 JANUARY 1916

After a Russian appeal for aid, the British launched an expedition to take the Gallipoli Peninsula, hoping that by doing so they would knock Turkey out of the war. The campaign was a fiasco, as the Turkish repelled the Allied forces from fortified high ground, amassing huge numbers of casualties on both sides – 252,000 Allied and 218,000 Ottoman. After months of fighting and no gains on either side, the British forces withdrew. This disastrous campaign badly tarnished Winston Churchill and Field Marshall Lord Kitchener's reputations.

The HMS Irresistible abandoned on 18 March 1915

THE BATTLE OF THE SOMME

FRANCE 1 JULY - 18 NOVEMBER 1916

Fought between the armies of Britain and France against the German Empire, this five-month battle took place on either side of the river Somme in Northern France. Originally planned as a battle of attrition, the German Verdun offensive prompted the date of the planned attack to be brought forward. Although the numbers were highly in their favour, the Allies failed to destroy the German barbed wire and concrete bunkers, transforming no man's land into a mess of mud and craters. As the infantry pushed forward, the Germans manned their machine guns and picked off the soldiers with ease. One of the bloodiest battles in history, the Battle of the Somme claimed the lives of over 420,000 British, 200,000 French and 500,000 German soldiers. Gaining the Allies just 12 kilometres (7.5 miles) of ground, Sir Douglas Haig's decisions during the battle are still a source of great controversy today.

The Battle of Jutland
Although the British suffer heavy losses, the German Navy is largely put out of operation for the remainder of the war after this battle.
31 May 1916

The HMS Birmingham sinking at Jutland

USA declares war
In response to the sinking of more US ships by the German U-boats, the United States join the fight against Germany.
6 April 1917

Captured U-boats in Trondheim, Norway

Battle of Cambrai
Utilising tank warfare, the British artillery penetrate the German Hindenburg Line. These tactics will play a large part in the fighting throughout 1918. **20 November - 7 December 1917**

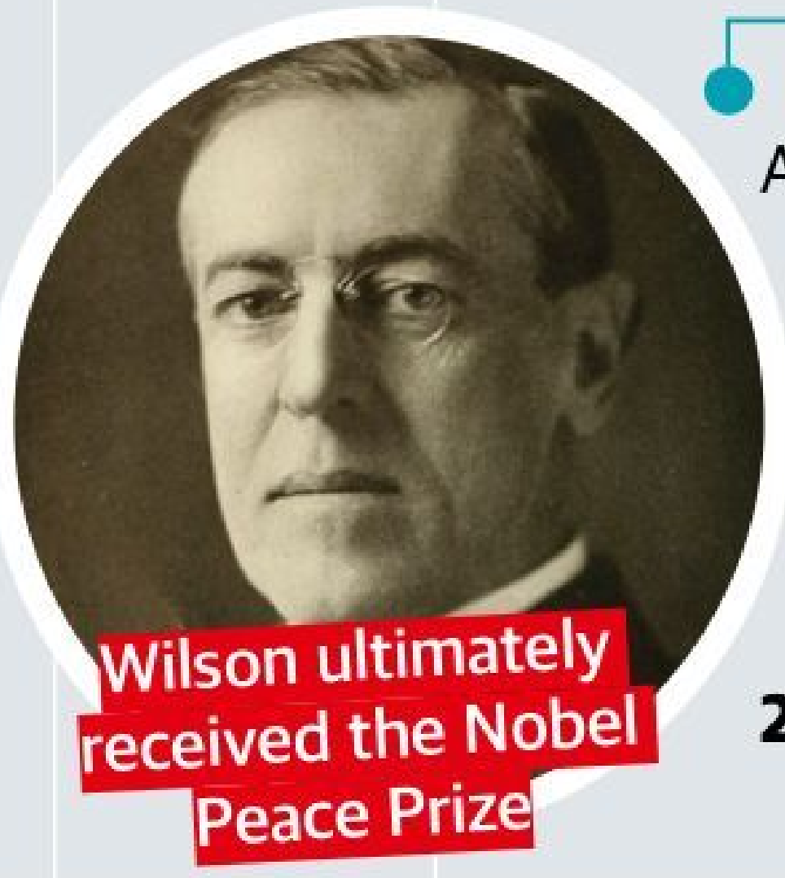
The Battle of Cambrai

Hindenburg Line collapses
After a 56-hour long bombardment, the Allied forces break through the last line of German defences on the Western Front, the Hindenburg Line.
29 September 1918

Kaiser Wilhelm II abdicates
Faced with a German revolution, Kaiser Wilhelm resigns as emperor of the German Empire and king of Prussia.
9 November 1918

Kaiser Wilhelm II

1916 1917 1918 1919


Wilson ultimately received the Nobel Peace Prize

Important telegraph
American President Woodrow Wilson is given the Zimmerman Telegraph by British intelligence. It urges Mexico to side with Germany, promising US territory in return.
25 February 1917

Battle of Passchendaele
Acting against the wishes of British PM David Lloyd George, Douglas Haig leads an offensive to reach the Belgian coast. Heavy losses result on both sides.
31 July - 6 November 1917

A scene of carnage at Passchendaele

The Treaty of Brest-Litovsk
The Russians sign an armistice with Germany, ending their involvement in the war. The terms are harsh, with Russia surrendering Poland and Ukraine.
5 December 1917

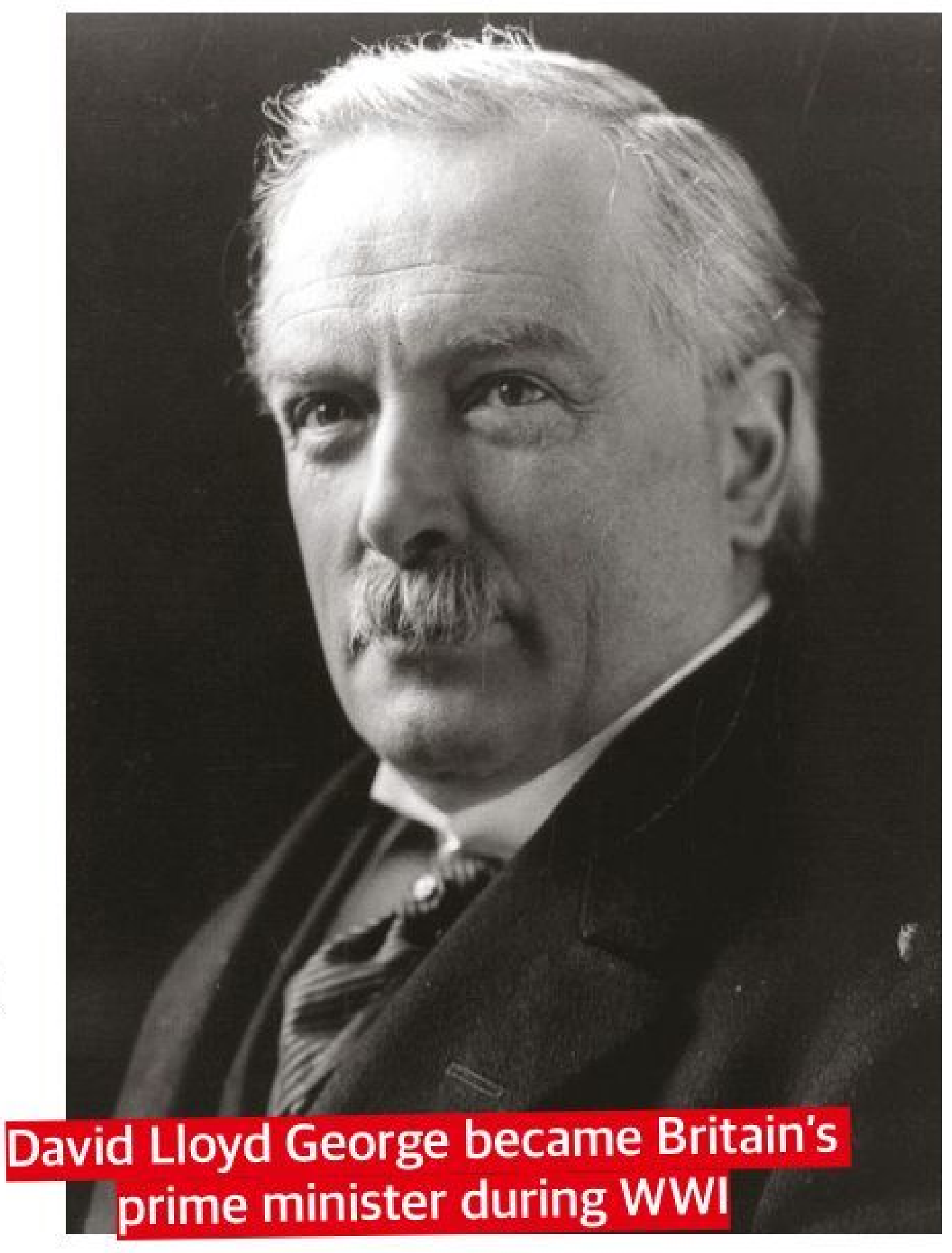
Turkey makes peace
Known as the 'Armistice of Moudros', the hostilities in the Middle Eastern theatre come to an end as the Turks finally ask for an armistice.
30 October 1918

The Treaty of Versailles signed
Five years to the day after Ferdinand's assassination, the Treaty of Versailles is signed between the Allied powers and Germany.
28 June 1919

Lloyd George becomes Prime Minister

GREAT BRITAIN 7 DECEMBER 1916

After becoming critical of Prime Minister Asquith after repeated military failures in the war, and with the support of the conservative and labour leaders, Lloyd George became the Liberal wartime prime minister. His concentrated wartime cabinet meet every day, increasing the pace of action during the war. Lloyd George was highly untrusting of his war secretary, Douglas Haig, who he accused of needlessly sacrificing lives. He agreed to the instatement of French Marshall Ferdinand Foch as supreme commander of all Allied forces, which he hoped would limit Haig's power. Lloyd George's determination to achieve unity of military control among the Allies is regarded to have had a great influence over their victory.


David Lloyd George became Britain's prime minister during WWI

RAF formed

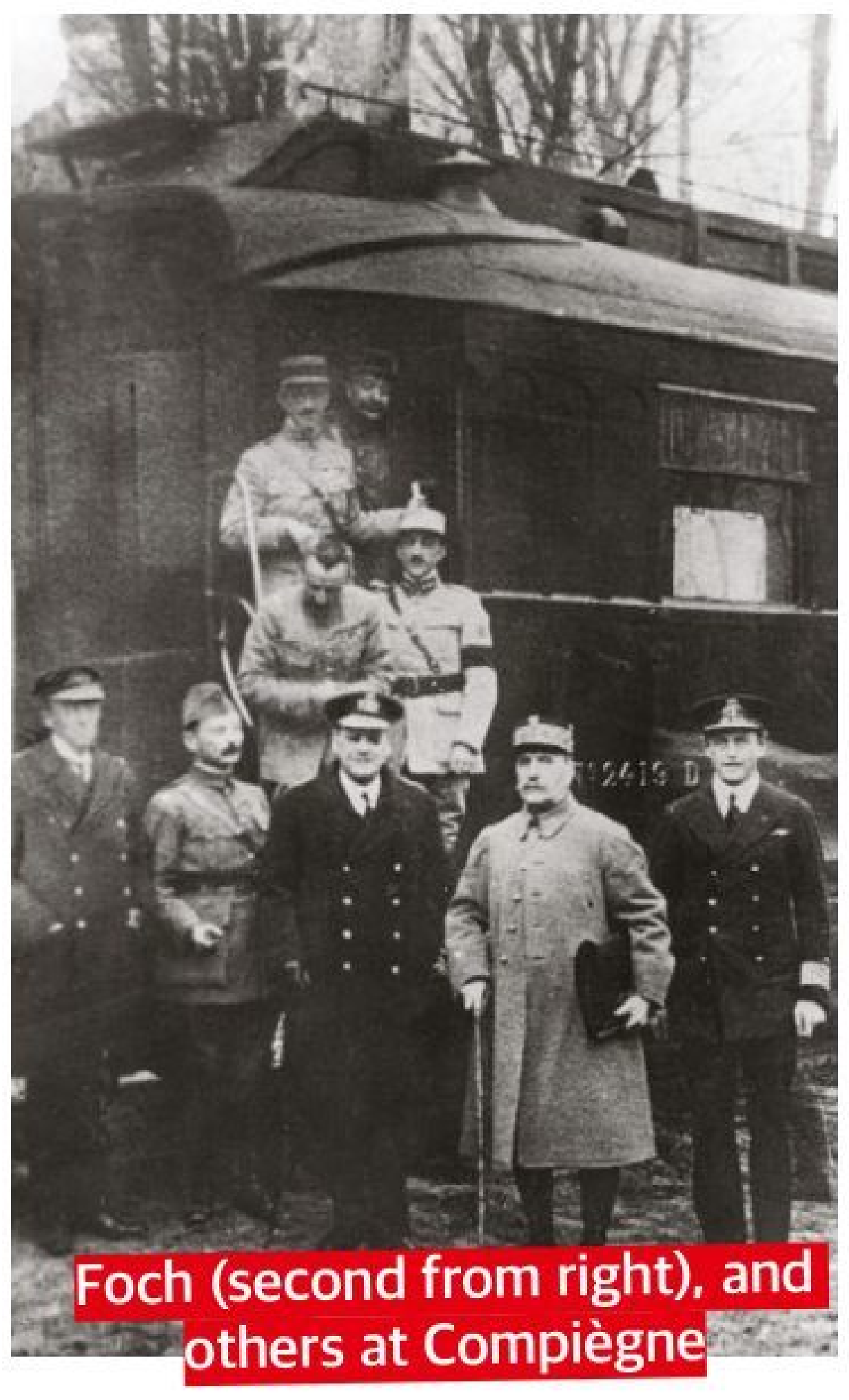
GREAT BRITAIN 1 APRIL 1918

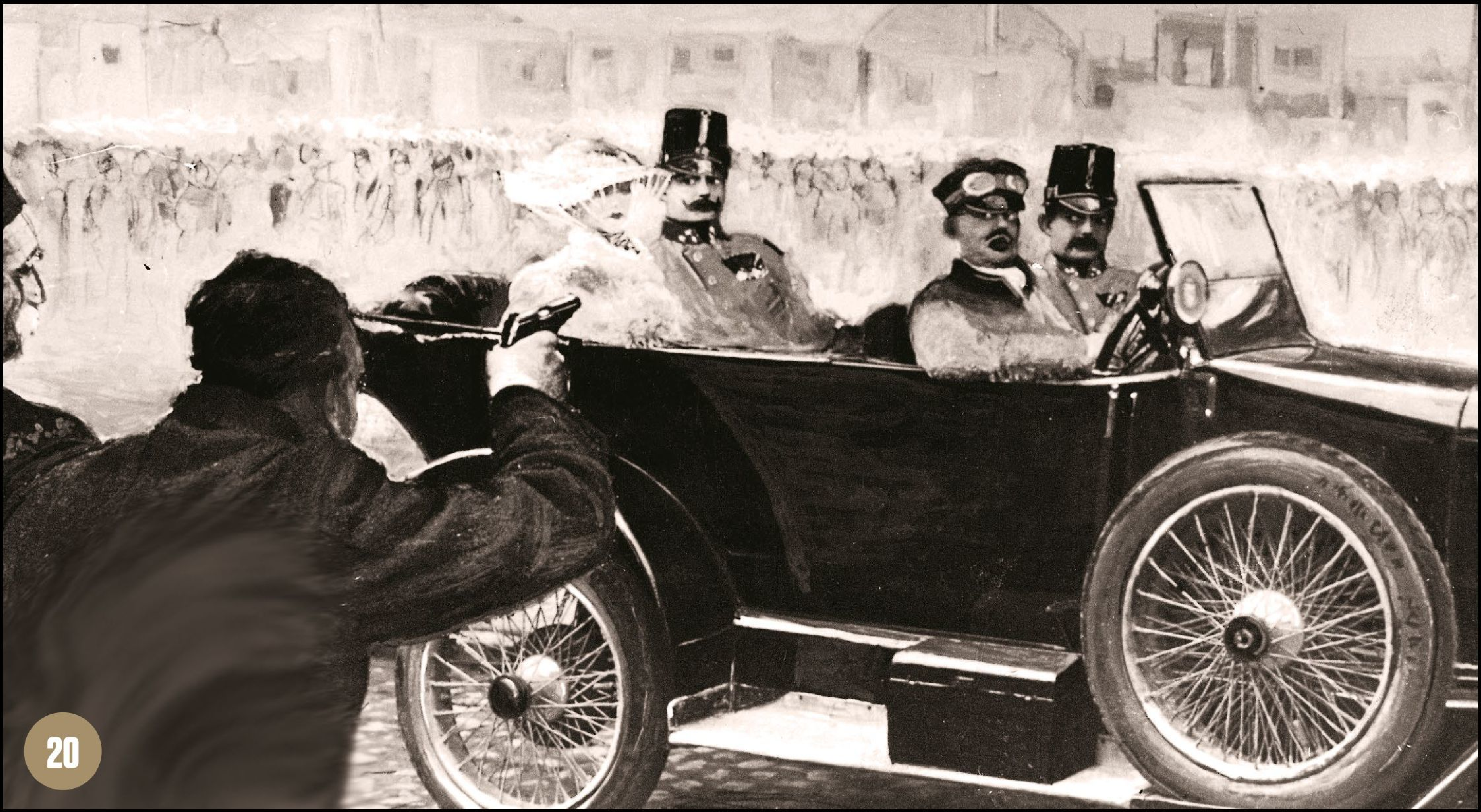
Comprised of the Royal Flying Corps and the Royal Naval Air Service, the RAF was formed to combine the strengths of both organisations. The RAF were involved in major offensives on the Western Front. Now the world's oldest independent air force, the RAF served a vital part of military operations throughout WWII and up to the modern day.

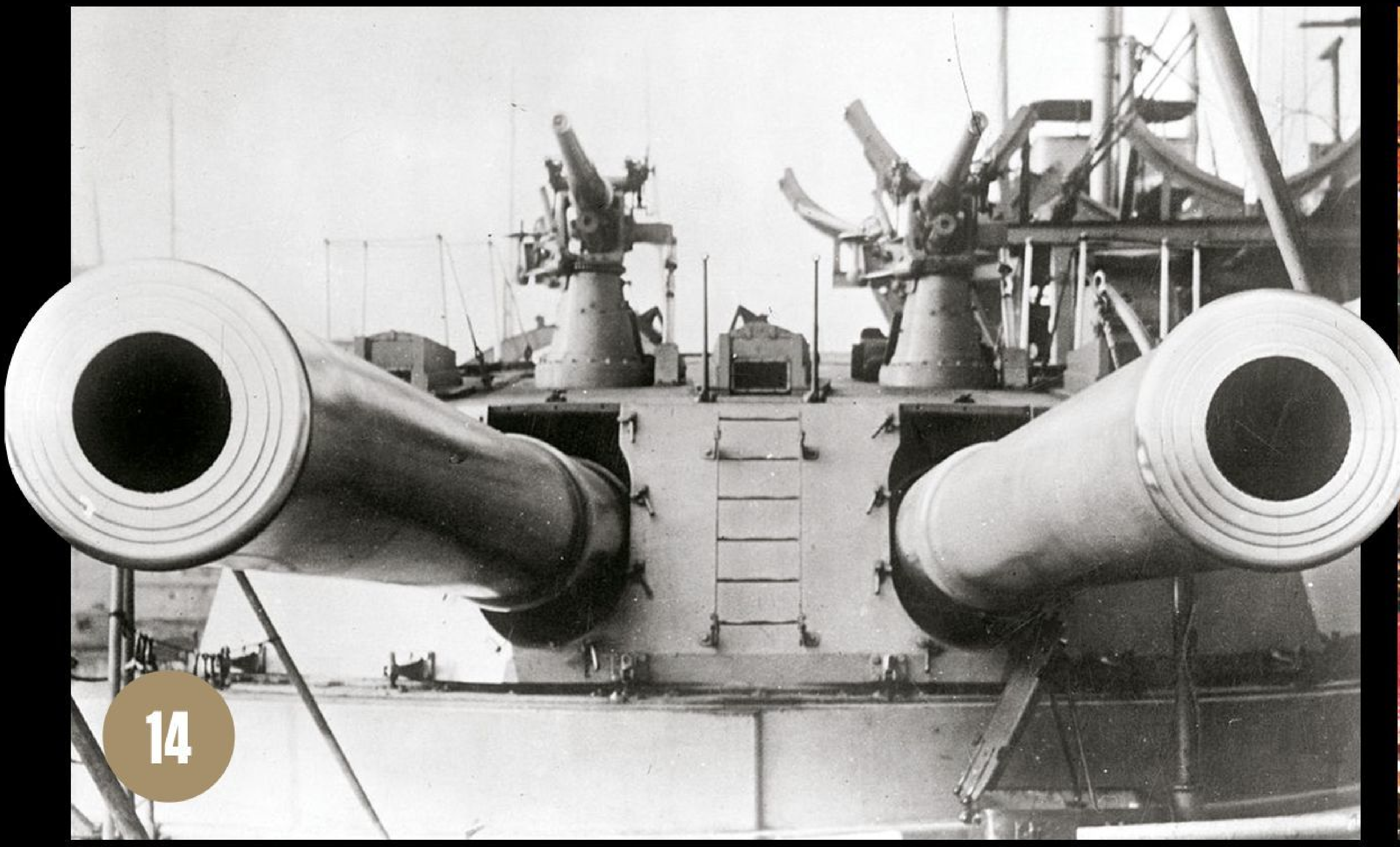
Armistice of Compiègne

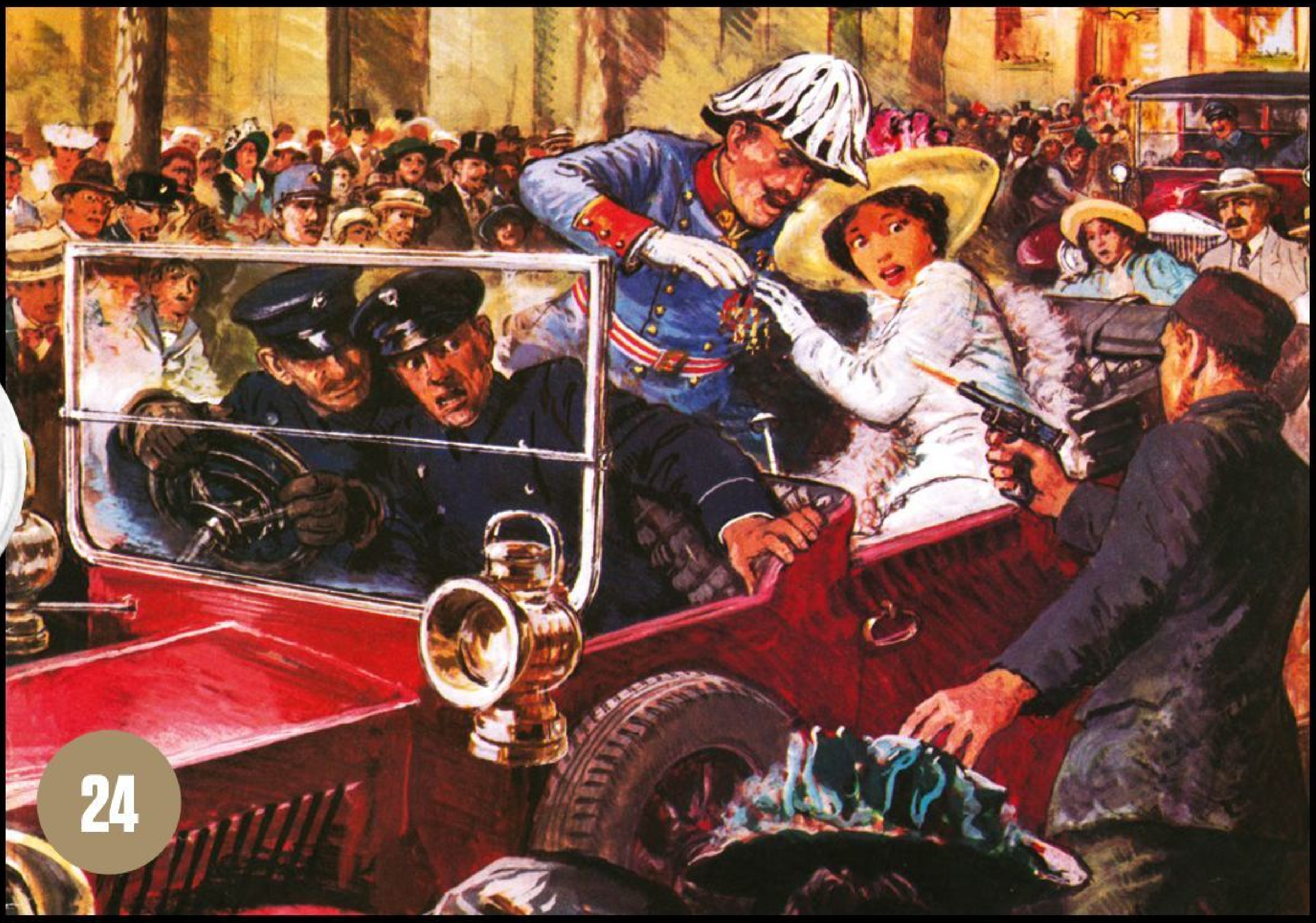
FRANCE 11 NOVEMBER 1918

Finally putting a stop to the fighting in Western Europe, this agreement ended the First World War. Now celebrated as Armistice Day, the cease-fire commenced on the 11th hour of the 11th day of the 11th month. The terms of the armistice were mainly written by the French Marshal Ferdinand Foch and included the withdrawal of German troops and exchange of prisoners.


Foch (second from right), and others at Compiègne







WWI origins

Discover the decisions that were made, events that occurred and the ties that were broken, just before the Great War

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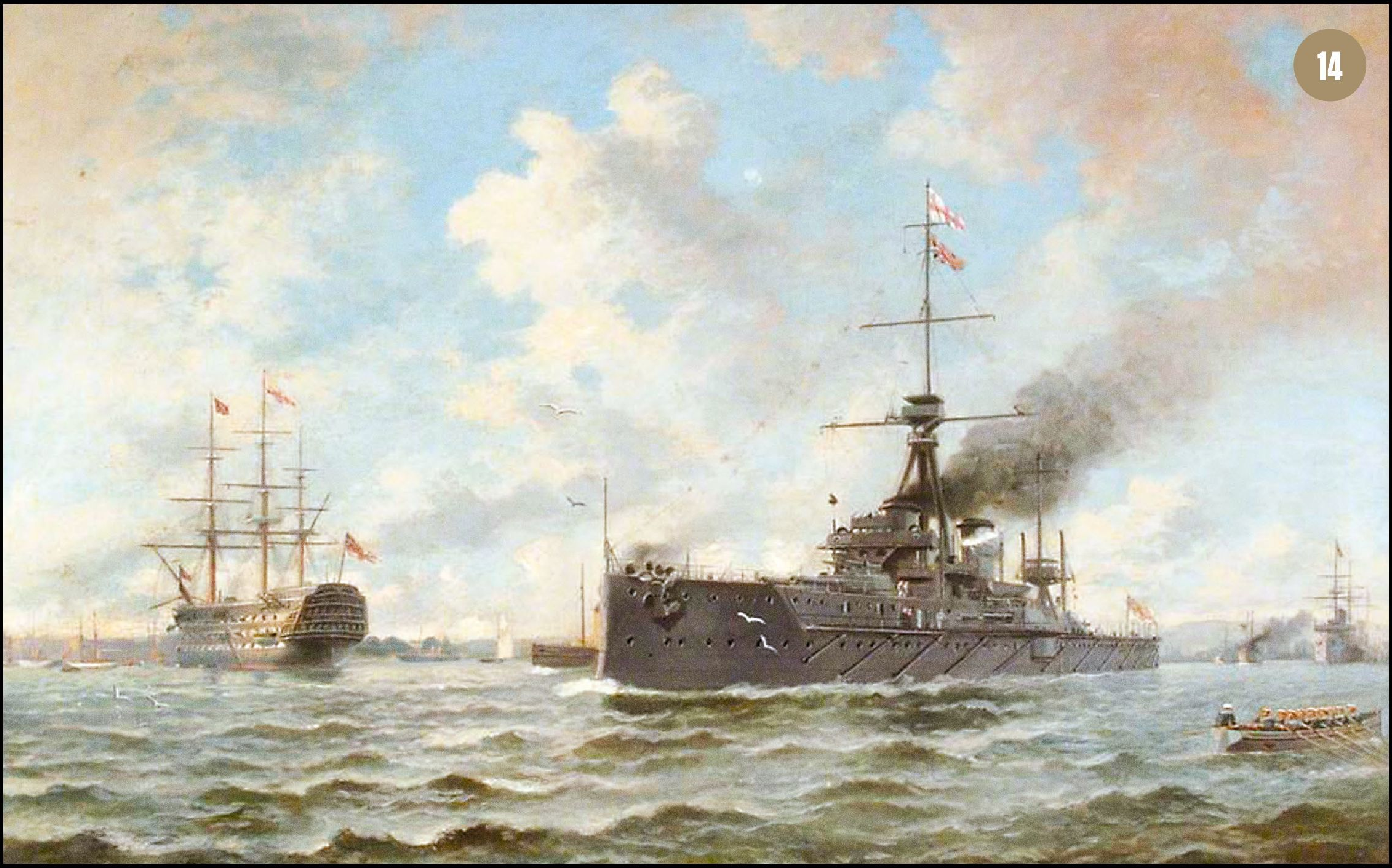
Discover the dangerous era that was beginning for Europe

16 **What caused the Great War?**
20 of the most pivotal and defining moments that led to World War I

24 **Assassination of Franz Ferdinand**
Discover the dangerous era that was beginning for Europe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Pre-WWI arms race

After the Anglo-Japanese treaty of 1902, Britain's age of Splendid Isolation was over – a dangerous and multipolar era was beginning

HMS Indomitable was part of the Invincible class of battle cruiser and packed some major firepower

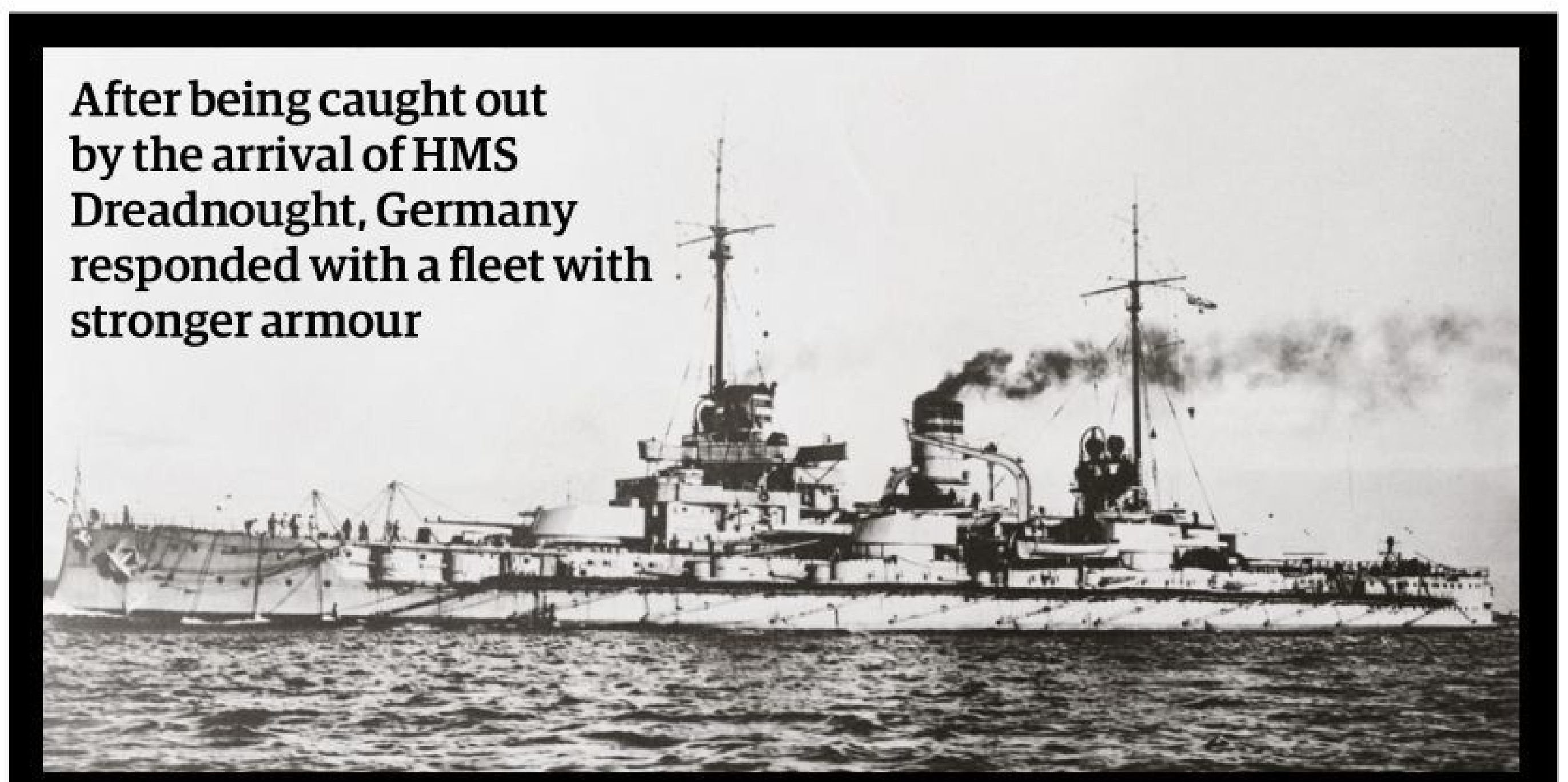
THE INVINCIBLE-CLASS BATTLE CRUISER

As the arms race intensified, the Royal Navy commissioned the revolutionary 'battle cruiser'

Commissioned: 1908

Country: British Empire

In 1908, Imperial Germany passed the Second Amendment to the Naval Law, a plan for an expanded High Seas Fleet. In response, Admiral John 'Jackie' Fisher improved on HMS Dreadnought and added a second revolutionary design to the Royal Navy's arsenal. Fast and lethal, the battle cruiser was as quick as an armoured cruiser, but as heavily armed as a battleship.


After being caught out by the arrival of HMS Dreadnought, Germany responded with a fleet with stronger armour

THE NASSAU-CLASS BATTLESHIP

The German High Seas Fleet launches its first dreadnoughts

Commissioned: 1910 **Country:** German Empire

The four Nassau-class battleships were Germany's first riposte to HMS Dreadnought. They were slower, rolled in heavy seas and were equipped with smaller 11-inch guns, but the arrangement of their turrets allowed them to match Dreadnought shot for shot: eight guns for forward and aft firing, and six for a broadside.

RICHARD BURDON HALDANE

Concerned at Germany's armed response to dreadnought, Britain's Secretary of State for war travelled to Germany for crisis talks

Years active: 1905-12

Country: British Empire

Richard Burdon Haldane regularly met with Kaiser Wilhelm to try to agree terms. Peace talks came to a head in 1912, when Haldane travelled to Germany to quell the friction. Haldane's mission lasted four days and ended in failure when Germany announced further expansion to its navy. Luckily, Haldane was in fact fully prepared for a European war, implementing widespread reforms to the British Army throughout his tenure.

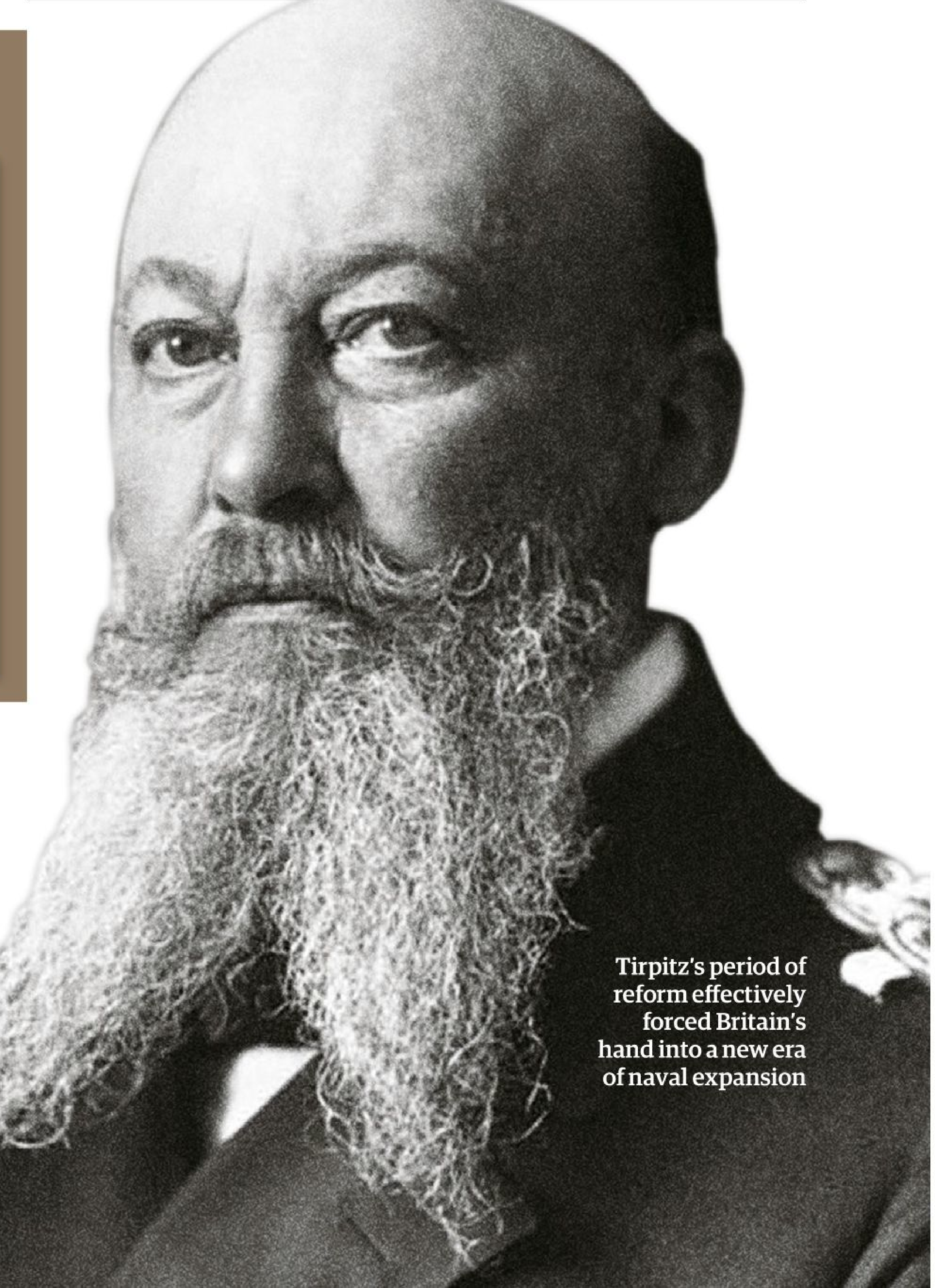
Right: After struggling to suppress Germany's imperial ambitions, Haldane ensured that the British forces were ready for action

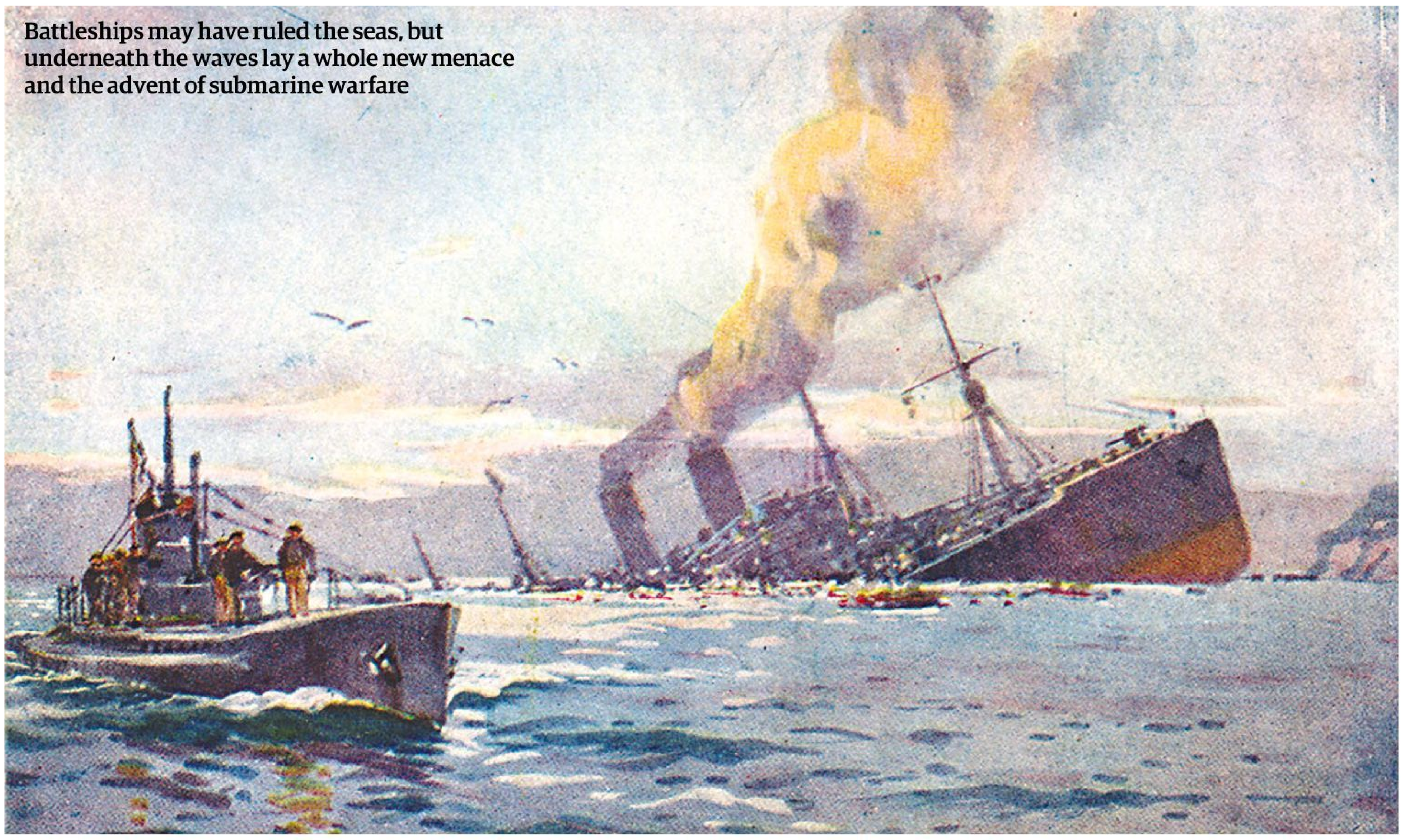
ALFRED VON TIRPITZ

The aggressive and enthusiastic Secretary of State who transformed the German presence on the seas

Years active: 1897-1916 **Country:** German Empire

Without Tirpitz's championing of the five Naval Laws passed between 1898 and 1912, the Anglo-German naval arms race would have been very different. His enthusiasm for a drastically expanded German navy led to major reform in pursuit of Britain's dominance. Tirpitz was the mastermind of radical advancements, making clear that Britain was now the enemy.


Tirpitz's period of reform effectively forced Britain's hand into a new era of naval expansion



Battleships may have ruled the seas, but underneath the waves lay a whole new menace and the advent of submarine warfare

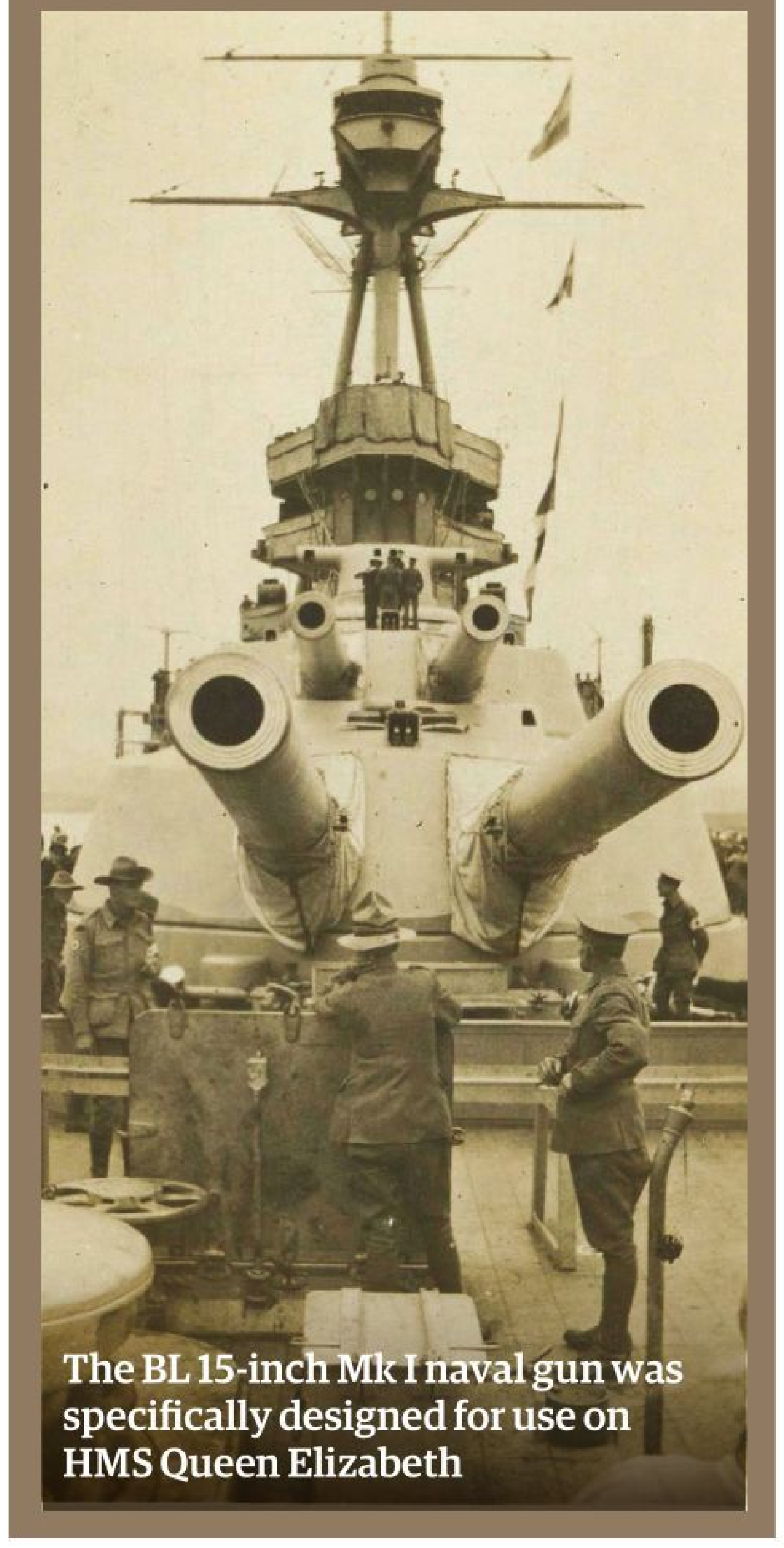
HMS QUEEN ELIZABETH: THE SUPER-DREADNOUGHT

The oil-powered behemoth and the world's first 'fast battleship'

Commissioned: 1914

Country: British Empire

Like the battle cruiser, the 'fast battleship' was developed in response to the increasing power and speed of the dreadnoughts. The first of the fast battleships, the Queen Elizabeth carried eight 15-inch guns on its centreline. It had four turrets, as dispensing with the fifth created space for its new oil-powered turbines.



The BL 15-inch Mk I naval gun was specifically designed for use on HMS Queen Elizabeth

U-31 SUBMARINE

The invisible dreadnought hunter beneath the waves

Commissioned: 1914

Country: German Empire

During an annual pre-war British fleet exercise, two British submarines posing as enemy infiltrators were able to torpedo three battleships. Britain may have had the edge with its battleships and battle cruisers, but in 1914, Germany launched its first diesel-powered submarine, U-31, with a range of 12,553 kilometres (7,800 miles). They would strike fear into the hearts of Royal Navy admirals as the arms race took another turn.

> "They would strike fear into the hearts of Royal Navy admirals as the arms race took another turn"

THE KOENIG CLASS

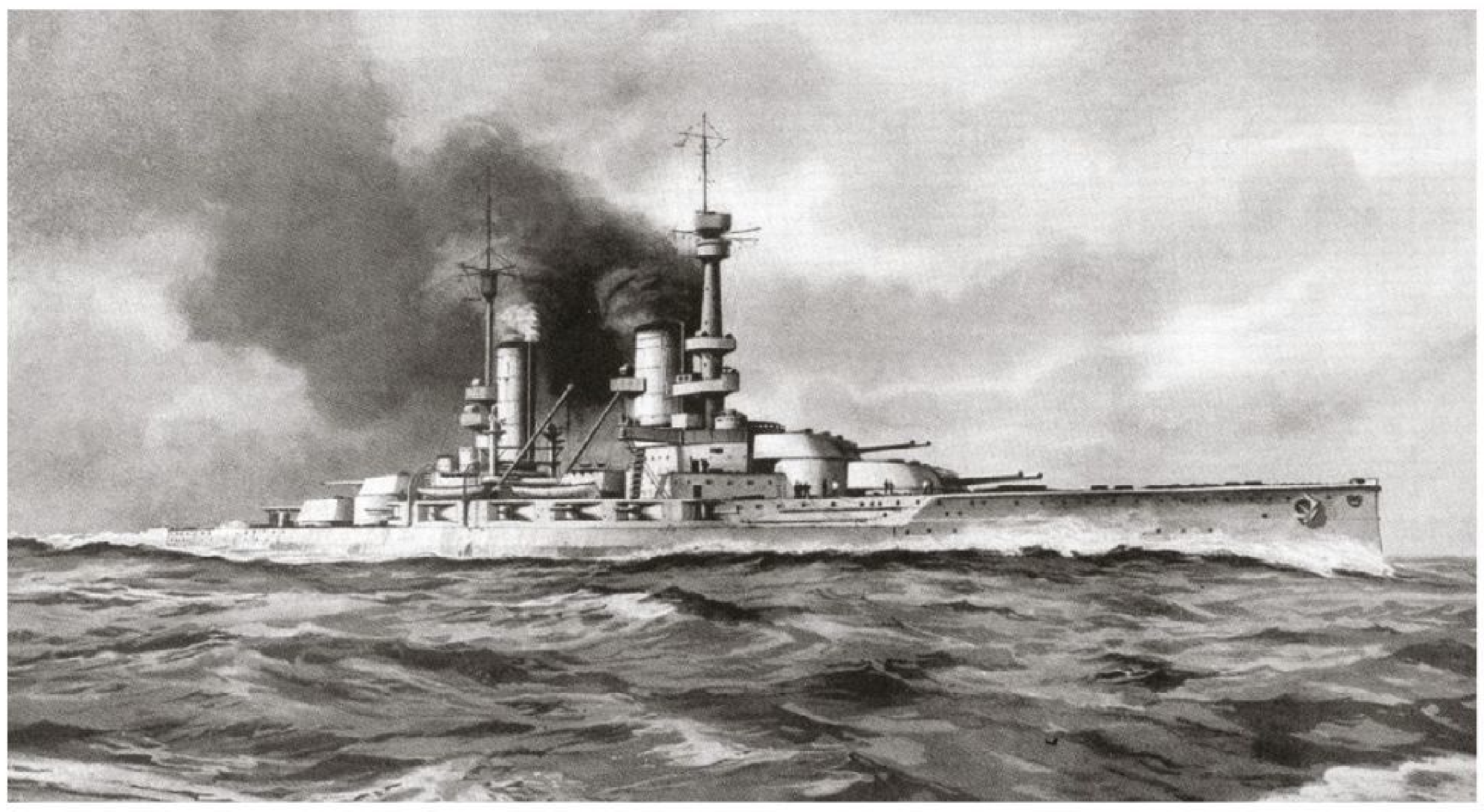
Germany adopts 'super-firing' turrets on the centreline

Commissioned: 1914

Country: German Empire

The four Koenig-class battleships carried their ten 12-inch guns on the centreline, for a wider arc of fire, and their five turrets were stacked in a new 'super-firing' arrangement. In battle, SMS Koenig displayed the new defensive capabilities of German vessels when it was struck by fire. It was able to flood some of its magazines when they caught fire, and then take on tons of water before retreating.

Below: The British and German fleets were so precious to their respective nations that the admirals were afraid for them to take any sort of damage



5 facts about THE ANGLO-GERMAN NAVAL ARMS RACE

The great 'Dreadnought Hoax'

In 1910, the practical joker Horace de Vere Cole tricked the Royal Navy into letting a party of 'Abyssinian royalty' inspect HMS Dreadnought. The 'royals' were five members of the Bloomsbury group in disguise.

The ramming of U-29

In Pentland Firth in March 1915, HMS Dreadnought rammed and sank the German submarine U-29. This is the only time that a battleship has been able to sink a submarine.

HMS Agincourt, the heaviest dreadnought of World War I

Carrying 14 12-inch guns in seven turrets, and weighing 30,250 tons, HMS Agincourt was the most heavily armed for its size of all the dreadnoughts in World War I.

The battle cruiser's fatal flaw?

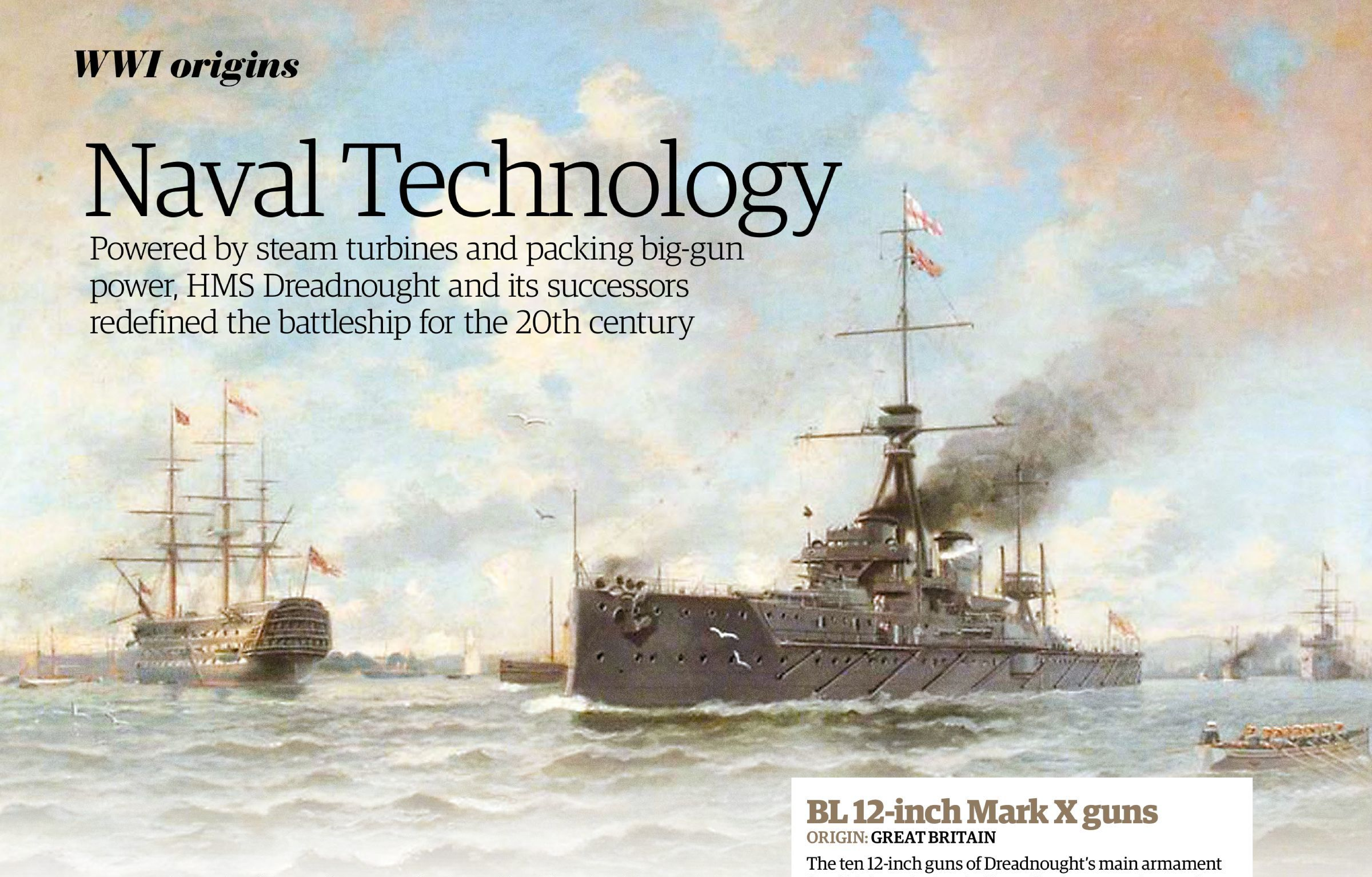
When one of the Invincible's turrets caught fire at the Battle of Jutland, the poor design in its ammunition handling exposed cordite charges to the flames. Invincible and two other battle cruisers were destroyed in this way.

Last of the Dreadnoughts

Launched in 1912, the USS Texas served in the Normandy Landings and at Iwo Jima and Okinawa. Today, the only surviving dreadnought is a floating museum in Houston, Texas.

Naval Technology

Powered by steam turbines and packing big-gun power, HMS Dreadnought and its successors redefined the battleship for the 20th century

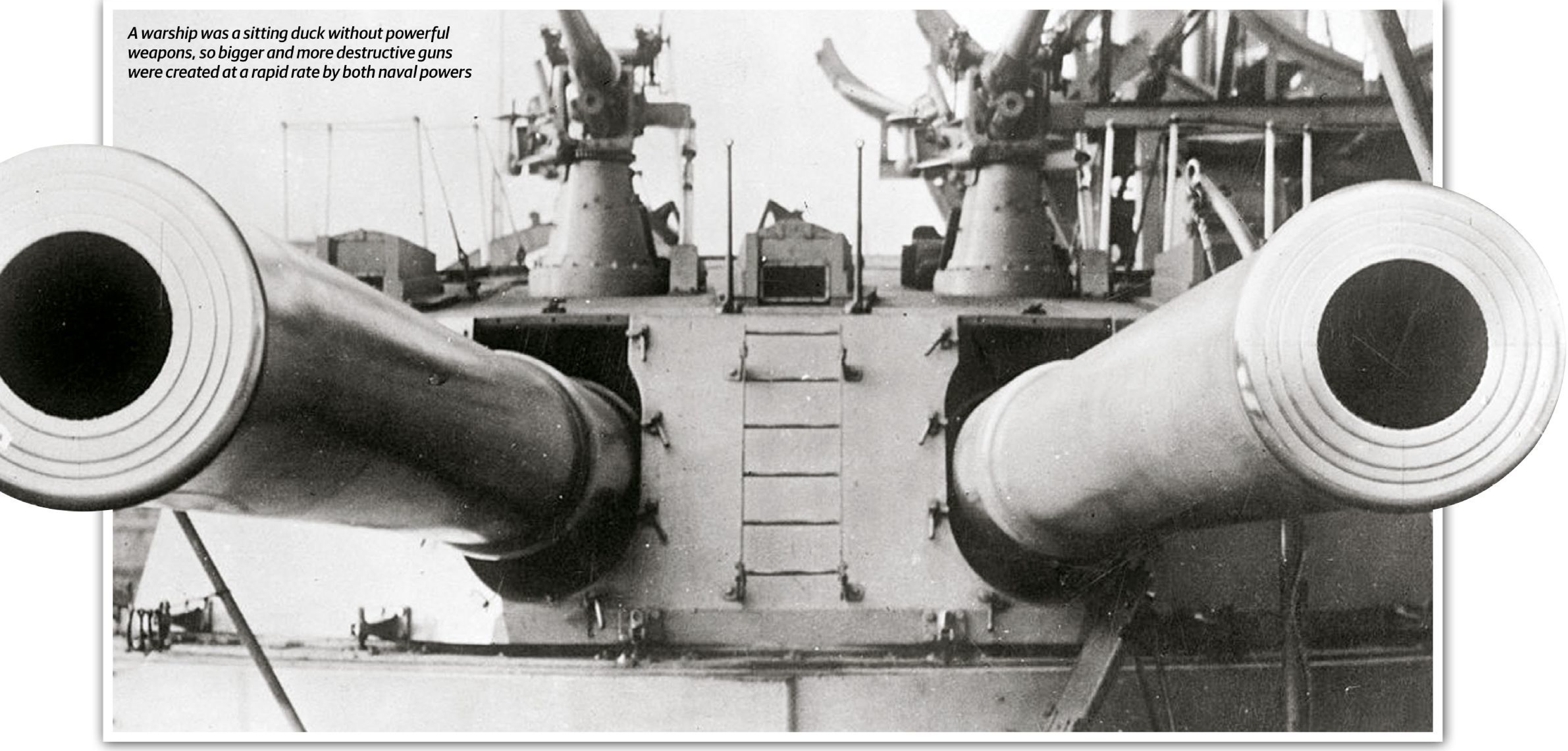


In 1904, with tension rising on the oceans, Sir John 'Jackie' Fisher, the visionary First Sea Lord of the admiralty, commissioned a new kind of battleship. Armed with long-range 12-inch guns, propelled by steam turbines and protected by armour and internal bulkheads, the dreadnoughts were a new and powerful package of machinery.

BL 12-inch Mark X guns

ORIGIN: GREAT BRITAIN

The ten 12-inch guns of Dreadnought's main armament fired high explosive shells and had a range of 14.2 miles. They were mounted in five powered turrets: one forward, one aft, one amidships on the centreline and two in the 'wings', either side of the armoured superstructure.



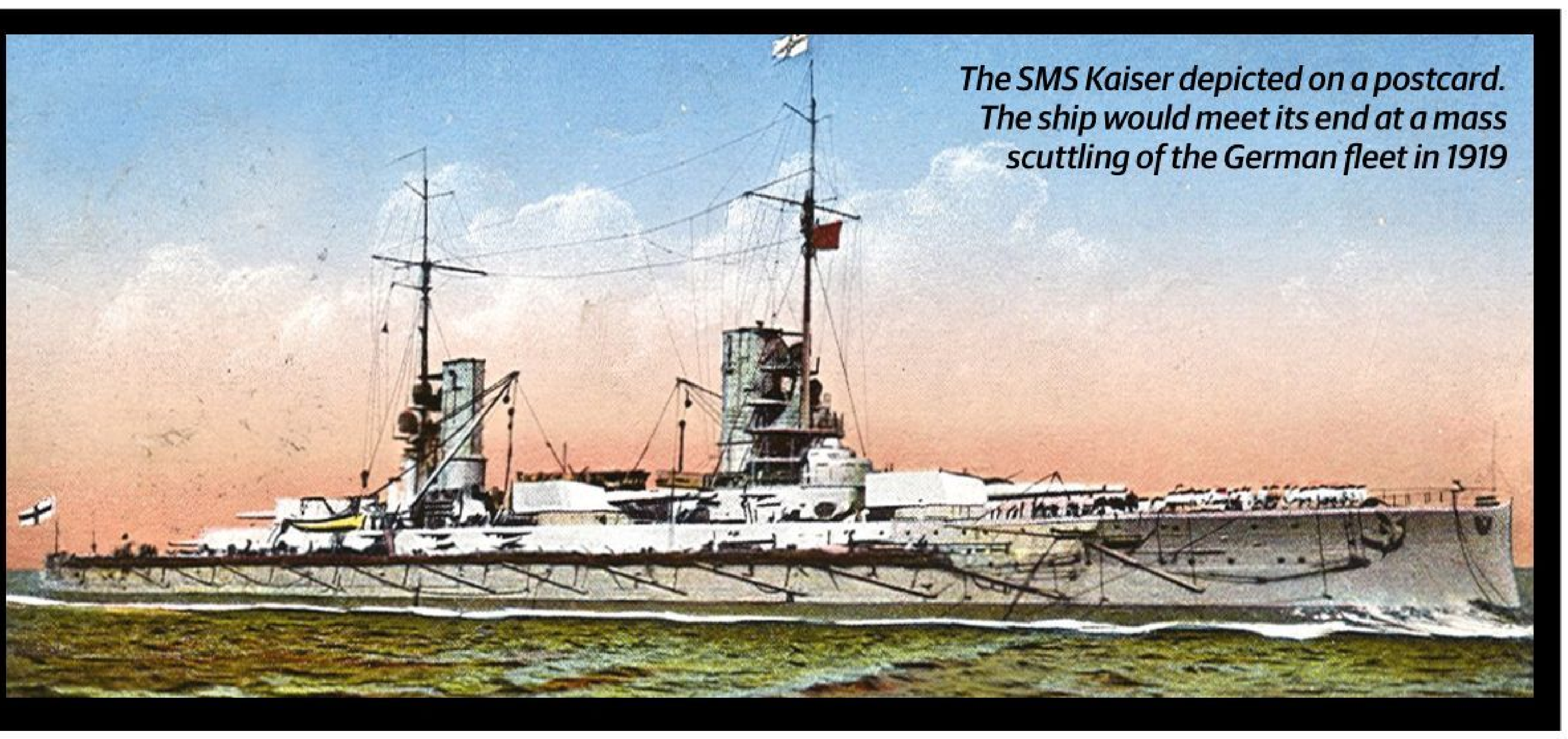
A warship was a sitting duck without powerful weapons, so bigger and more destructive guns were created at a rapid rate by both naval powers

KRUPP CEMENTED STEEL ARMOUR

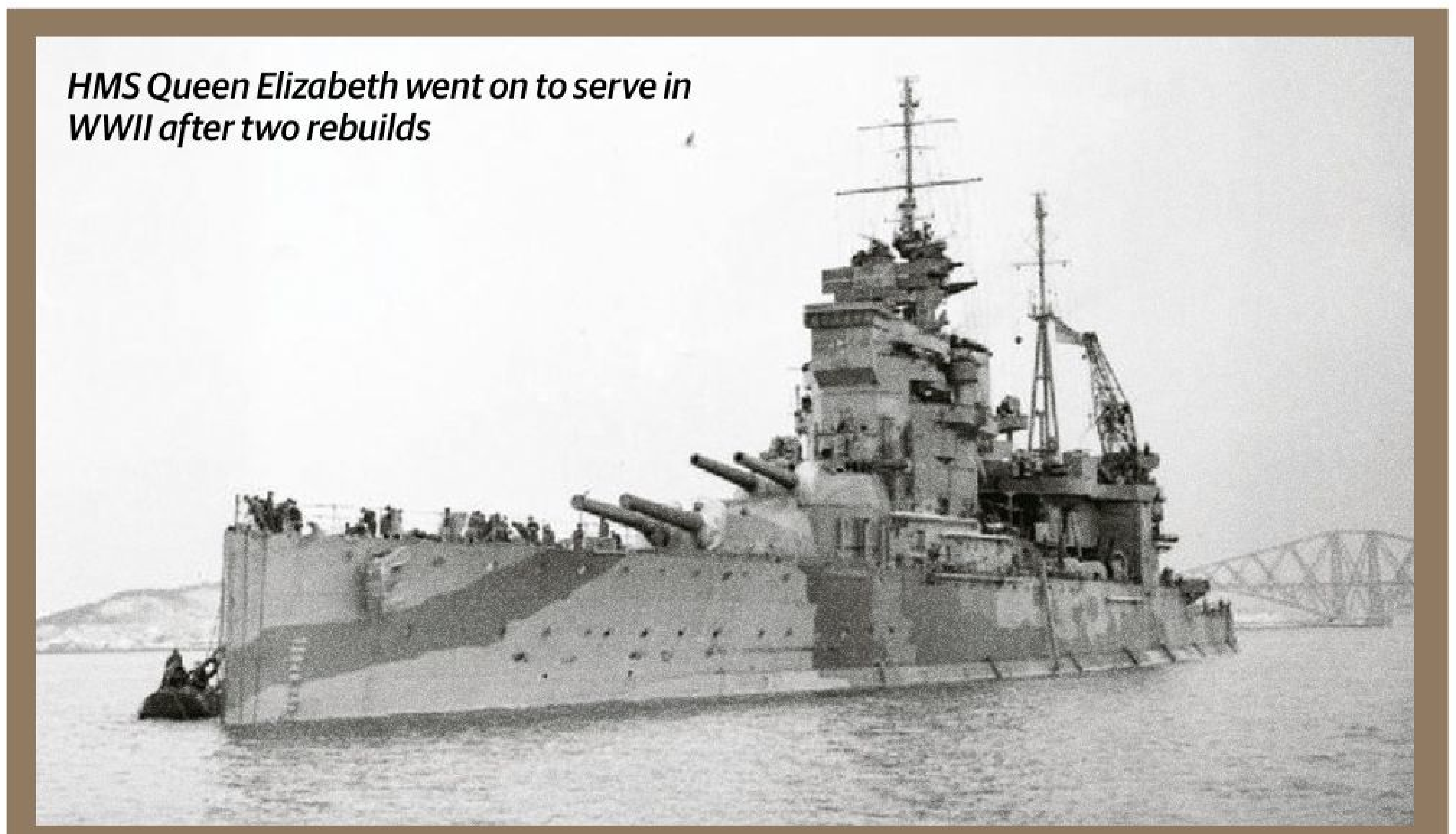
ORIGIN: GERMANY

Germany's Kaiser-class dreadnoughts used steel armour 'cemented' with metal alloys to minimise cracking during long engagements. Their deck armour was nearly four inches thick in the ships' crucial zones. Their waist was doubly protected: firstly by a 14-inch 'armoured belt' and then by an inner 'torpedo bulkhead'.

"Their deck armour was nearly four inches thick"



The SMS Kaiser depicted on a postcard. The ship would meet its end at a mass scuttling of the German fleet in 1919



HMS Queen Elizabeth went on to serve in WWII after two rebuilds

OIL-FIRED BOILERS

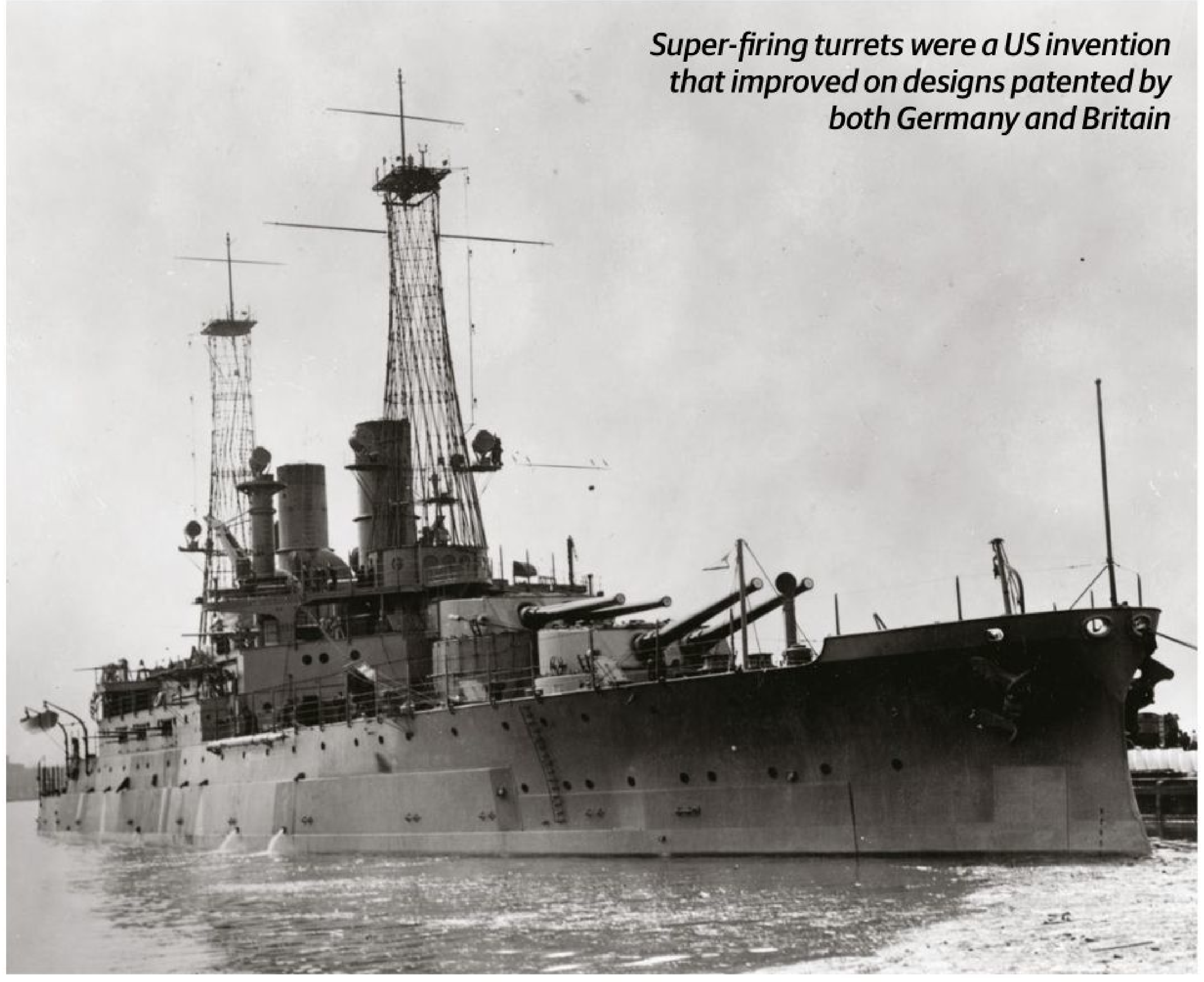
ORIGIN: GREAT BRITAIN

Dreadnought's coal-powered boilers left a thick tell-tale trail of smoke. The Queen Elizabeth-class 'super-dreadnoughts', launched in 1913, were oil powered. Oil is more energy-dense than coal, requires no stokers and produces less smoke. Winston Churchill, First Lord of the Admiralty, guaranteed to maintain a supply of these versions of the dreadnought, which were much more efficient than previous incarnations.

Super-firing turrets

ORIGIN: UNITED STATES

The USS South Carolina, launched in 1910, stacked one turret above and slightly behind another. This 'super-firing' design compressed firepower into a smaller space and produced a smaller target, but designers feared that the shock waves from the fire of one turret might damage the other. The innovative design came as a surprise to Germany and Britain, who would go on to use it on the Orion and Kaiser classes respectively.

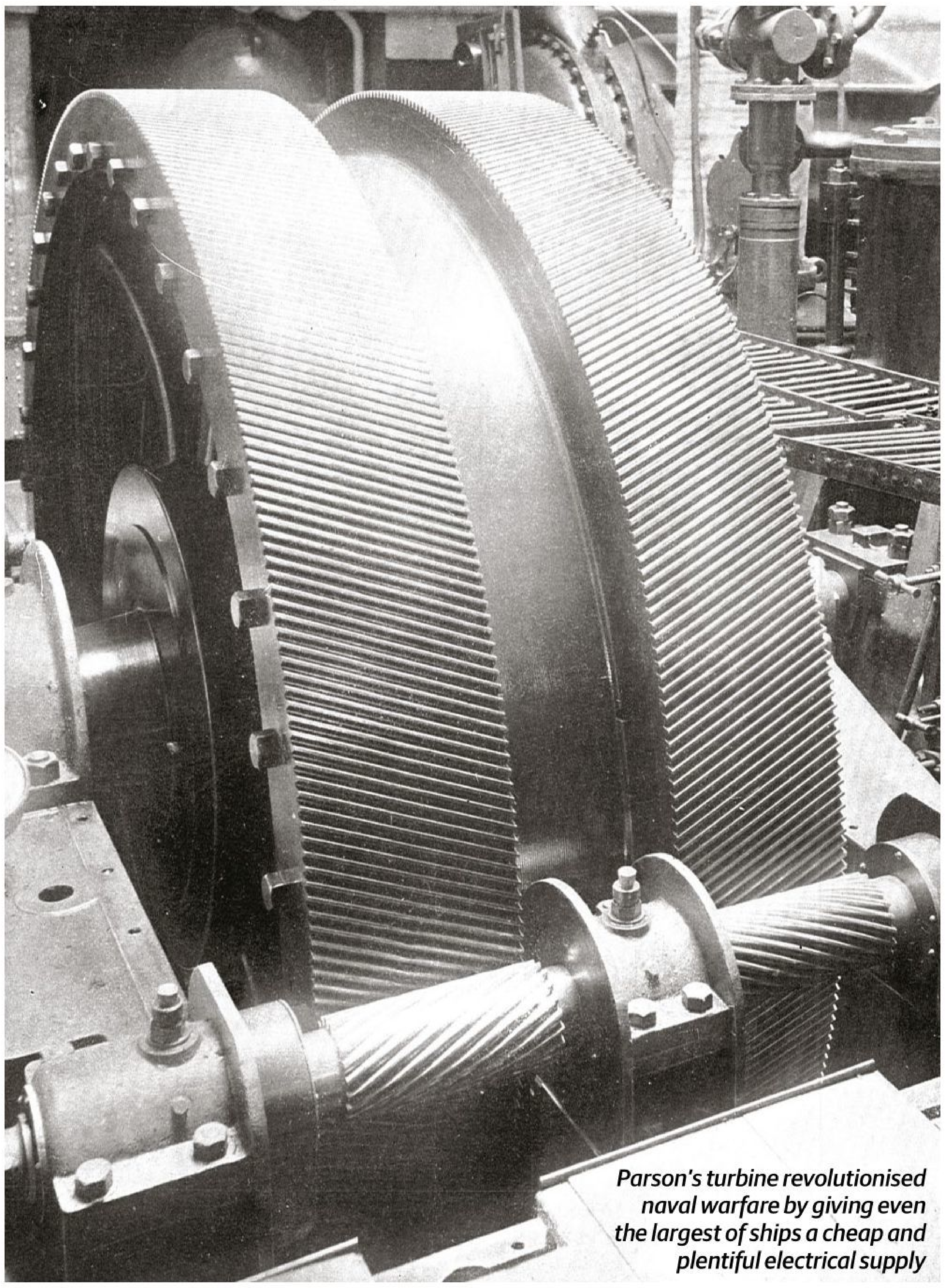


Super-firing turrets were a US invention that improved on designs patented by both Germany and Britain

Parsons direct-drive steam turbines

ORIGIN: GREAT BRITAIN

Invented by Charles Parsons in 1884, steam turbines enabled high-speed, long-range cruising. Dreadnought carried two pairs of direct-drive Parsons turbines. Each was powered by 18 Babcock and Wilcox water-tube boilers, and drove two shafts with triple-blade propellers. Dreadnought's top speed was 21.6 knots (24.9 miles per hour).



Parson's turbine revolutionised naval warfare by giving even the largest of ships a cheap and plentiful electrical supply

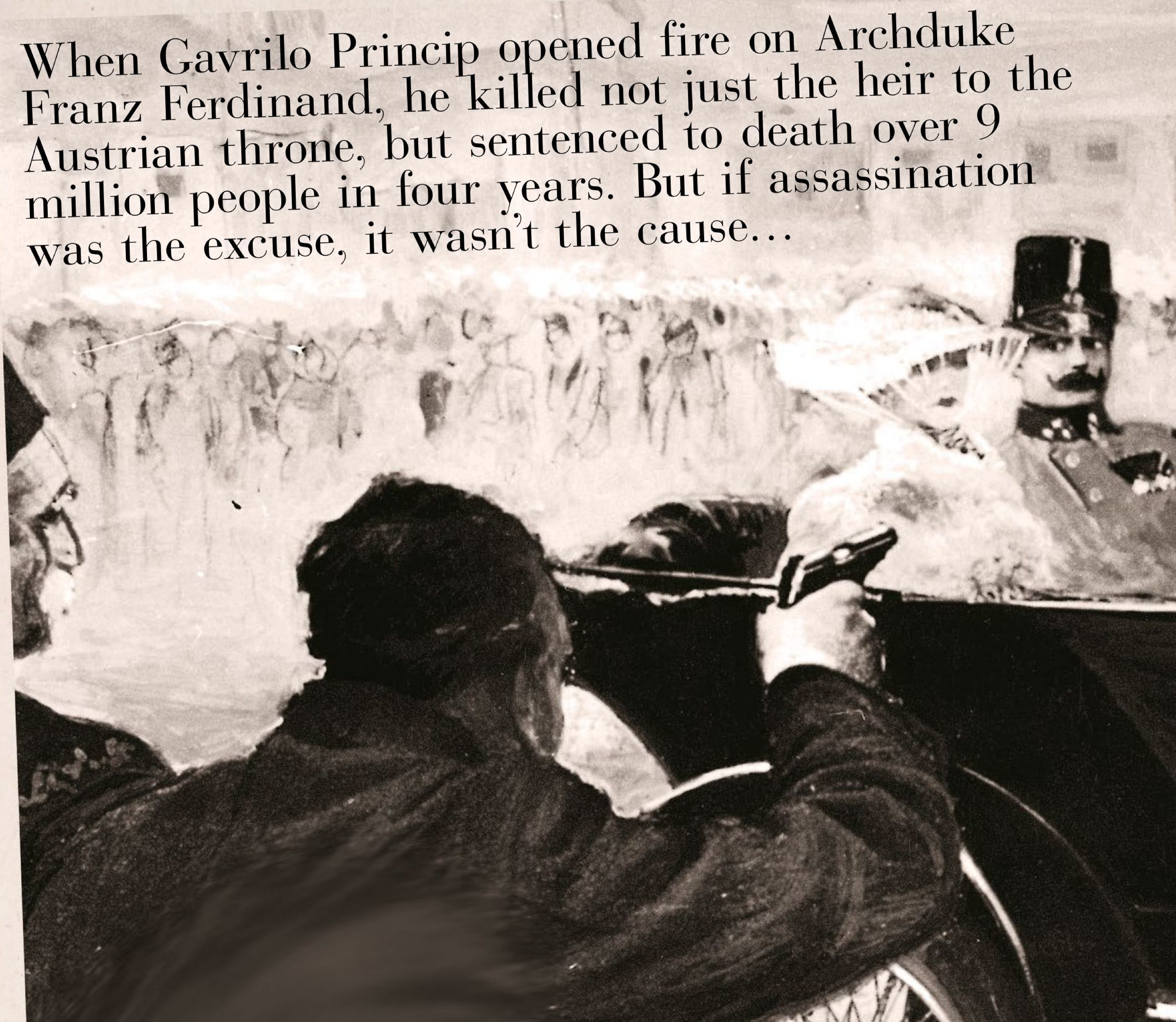
"Armed with long-range 12-inch guns, propelled by steam turbines and protected by internal bulkheads, the dreadnoughts were powerful package of metal and machinery"

28 June 1914

WHAT CAUSED TH

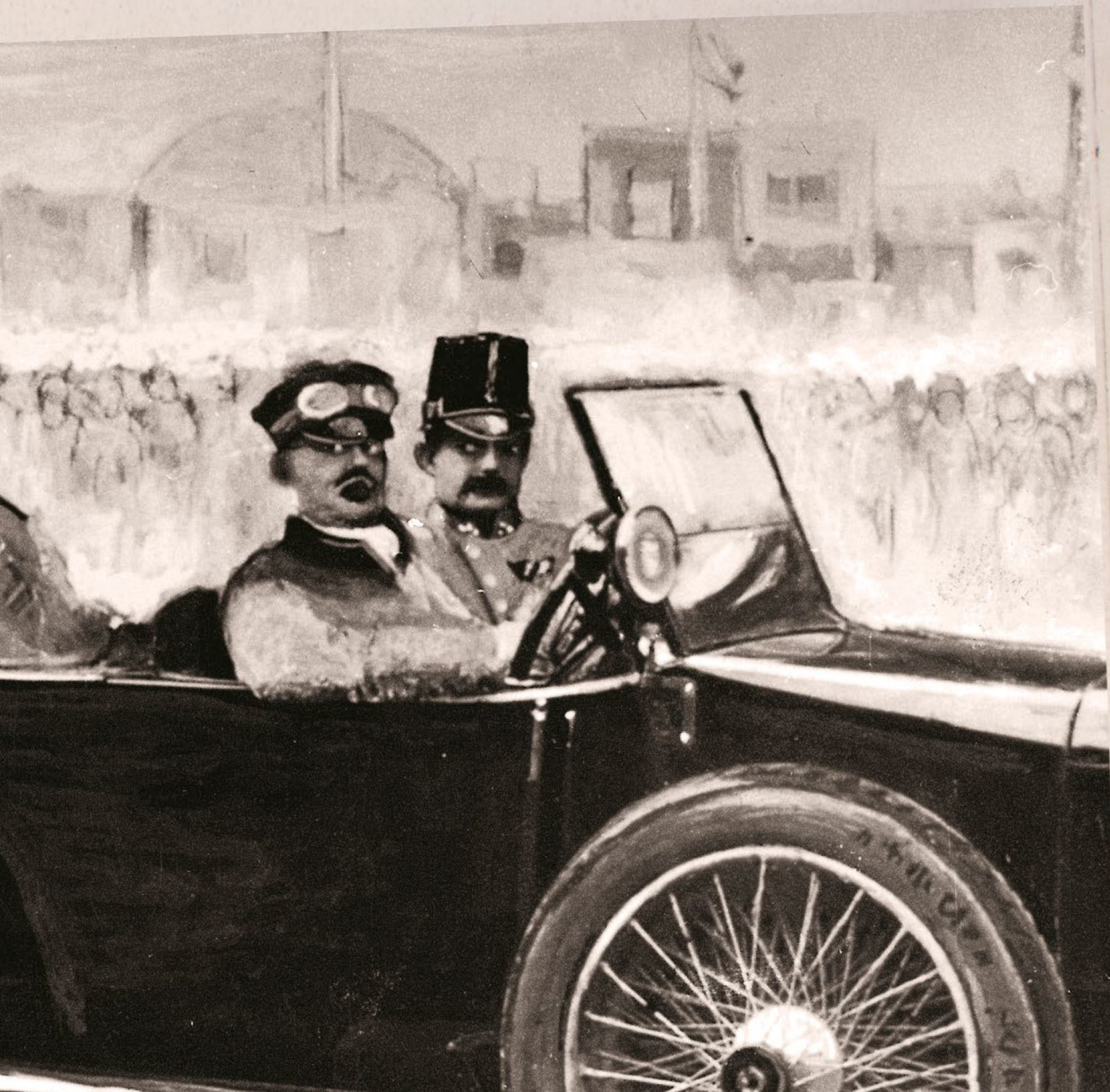
20 defining moments that

When Gavrilo Princip opened fire on Archduke Franz Ferdinand, he killed not just the heir to the Austrian throne, but sentenced to death over 9 million people in four years. But if assassination was the excuse, it wasn't the cause…



E GREAT WAR?

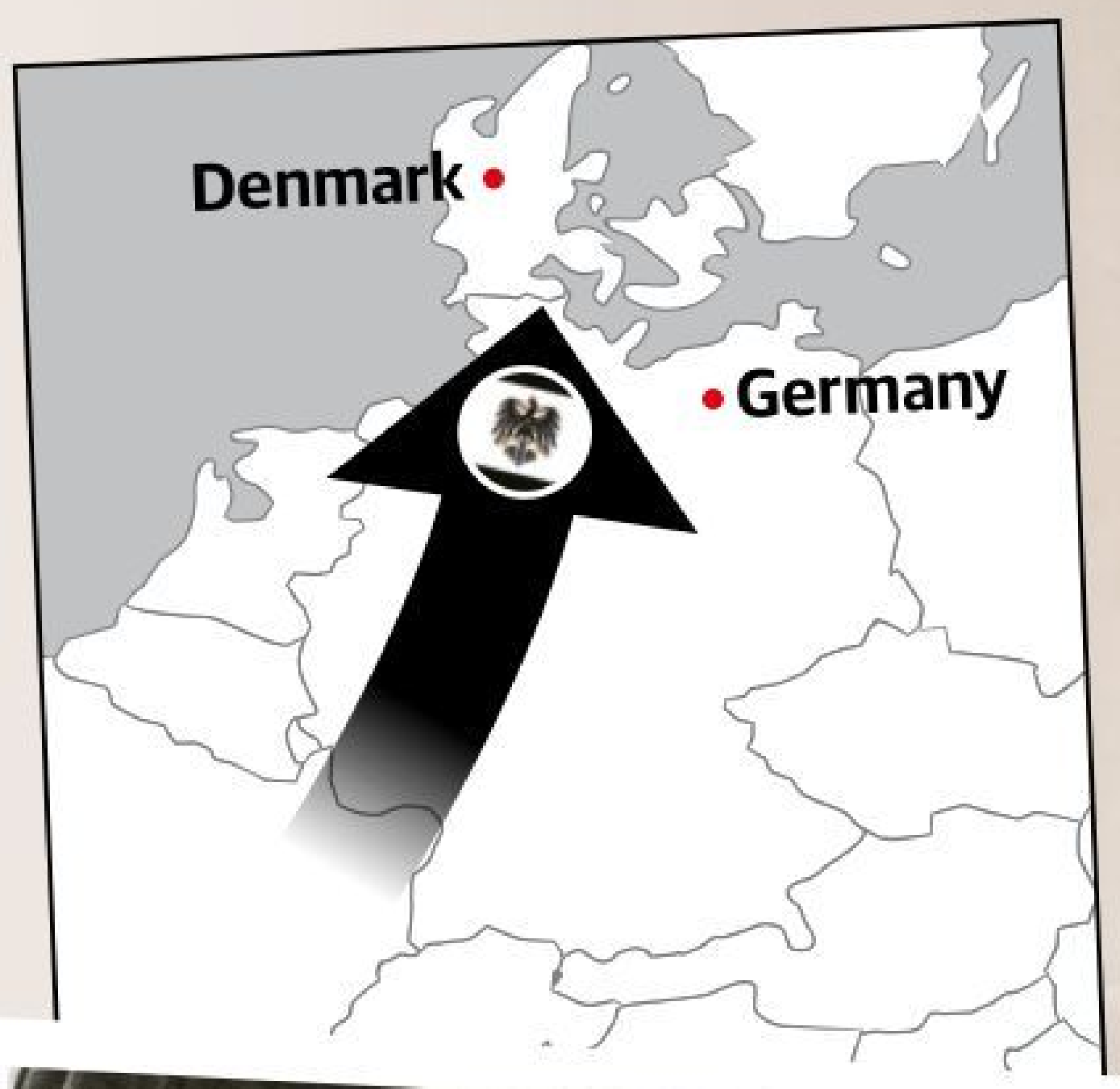
led to World War I



1 February 1864

PRINCE EDWARD NURSES A GRUDGE

British foreign policy is redefined after the Prussian invasion of Denmark



Prussia and Austria's devastating seizure of the ethnically mixed territories of Schleswig and Holstein, which separated Denmark from what is now Germany, shocked the young British Prince Edward – the future King Edward VII – who was only months into his marriage to Alexandra of Denmark. The pair openly supported the Danes in the conflict in spite of an increasingly pro-German Queen Victoria.

This conflict, the Second Schleswig War – coupled with his cold relationship with his mother – formed the bedrock of Edward VII's foreign policy, and he cultivated a staunchly pro-French and anti-German clique that would survive in government long after his death in 1910. Under Edward VII's influence, the Royal Navy was reformed and modernised to counter the growing German navy, and Britain's aloof isolation slipped away in favour of treaties with France and Russia that would one day become the Triple Entente, dragging the United Kingdom and its empire into war.

Prince Edward VII and Queen Alexandra in 1896

8 February 1867

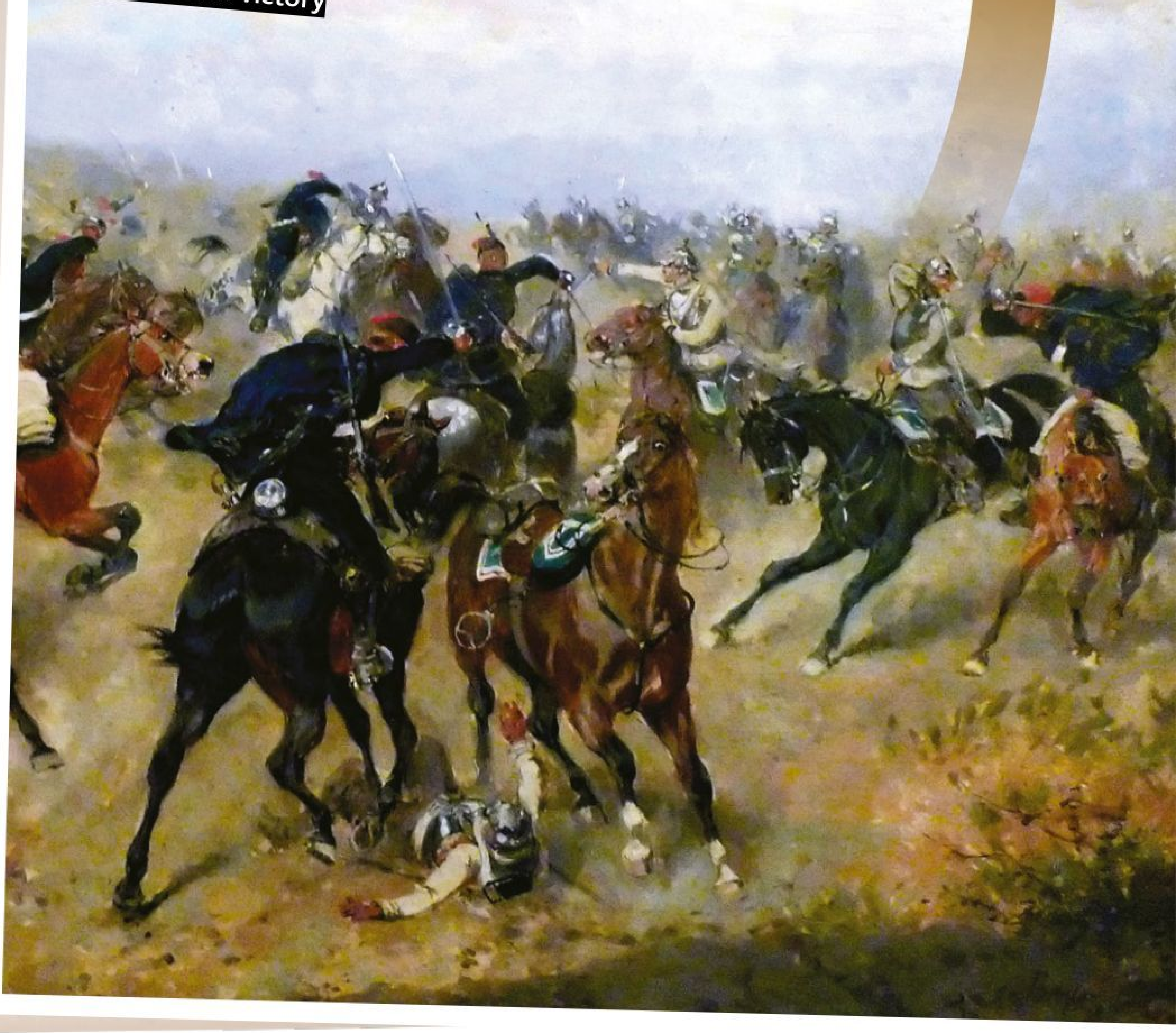
THE OLD EMPIRE CRASHES DOWN

The Dual Monarchy replaces the Austrian Empire

A dispute between the traditional guiding hand of the Germanic states – Austria, whose Habsburg family had ruled since 1278 – and the increasingly powerful Kingdom of Prussia – under Prime Minister Otto von Bismarck and King Wilhelm I – allowed the growing rivalry between the two powers to bubble to the surface in open war.

Left weakened and with Hungary set to break away, the Austrian Empire was dissolved in favour of a cumbersome Dual Monarchy of Austria-Hungary, in which each state was governed independently and then together by a convoluted system of joint-ministers. This solution to Austria's internal instability in turn created a whole new set of stress points in the vast edifice, including Hungary's oppressive policies towards its non-Hungarian subjects, made them easy prey to Serb and Russian-sponsored agitation that would prove so toxic in Austrian-run Bosnia in 1914.

With Austria's traditional dependencies, the myriad small German principalities, now under the banner of one Prussian-dominated North German Confederation, Austria-Hungary had to look toward the Balkans and the waning Ottoman influence for opportunities to expand.

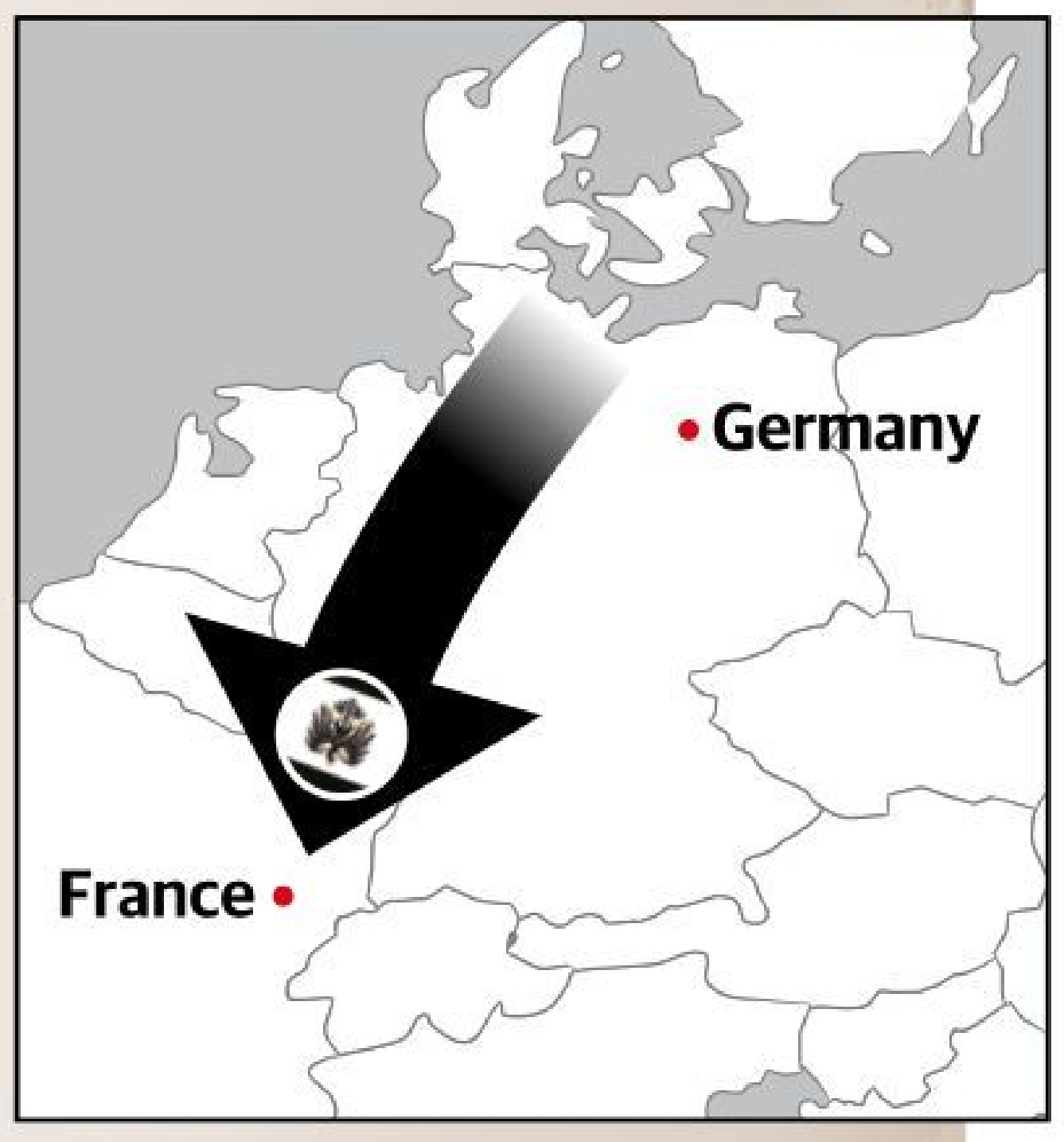


Prussian and Austrian cavalry face off at the Battle of Königgrätz, resulting in a decisive Prussian victory

French soldiers in the Franco-Prussian War

19 July 1870

Germany unites at France's expense



Believing "a Franco-Prussian War must take place before a united Germany was formed", Otto von Bismarck goaded France into attacking. The French defeat brought down the Second French Empire of Napoleon III – the monarch was captured along with the remainder of his army – and a vast Prussian occupation of huge swathes of France until war reparations were paid.

This humiliation, along with the annexation of the valuable and heavily industrialised Alsace-Lorraine border region became a huge national tragedy. It remained at the heart of French culture in the run-up to World War I, as foreign affairs revolved around preparing for a new conflict with Germany, and public opinion called for the return of the lost provinces. In the aftermath of the Franco-Prussian War, the North German Confederation was dissolved and replaced by a unified German Empire, led by Kaiser Wilhelm I and Chancellor Von Bismarck, while the French Third Republic formed in Paris.

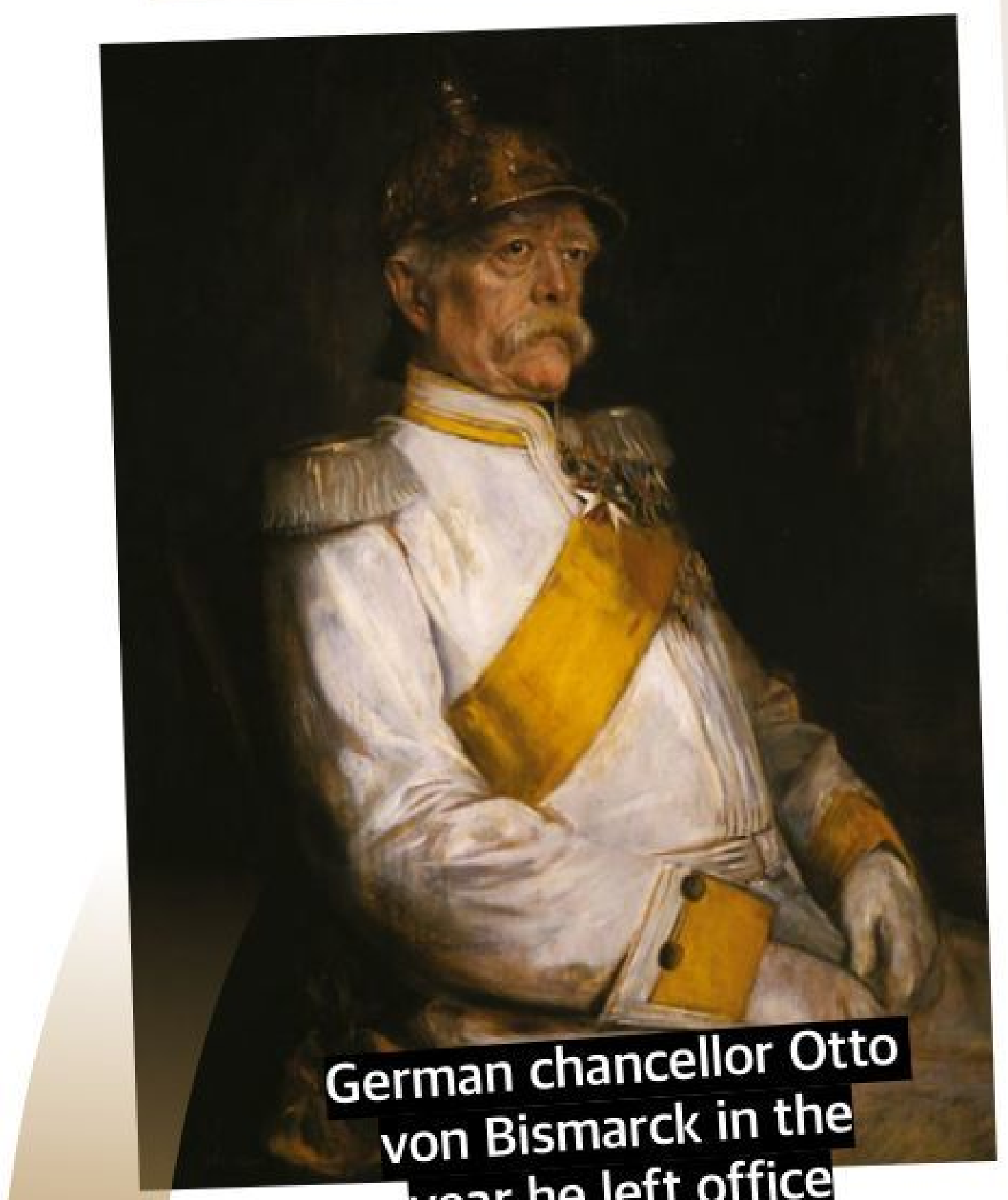
20 March 1890

BISMARCK IS FORCED INTO RETIREMENT

German foreign policy turns belligerent as the Kaiser takes over

Though Otto von Bismarck's role in the birth of the German Empire and a renewed enmity with France left him with a reputation for belligerence, the 'Iron Chancellor' was a stabilising force for central Europe. He kept Germany back from the rush for colonies that would bring it into direct competition with other powers, declaring in 1876 that a war in the Balkans wouldn't be worth "the healthy bones of a single Pomeranian musketeer". He also signed the Reinsurance Treaty with Russia in 1887 that limited their involvement in conflicts with each other.

Wilhelm II succeeded his father, Kaiser Frederick III, with a very different set of priorities and the two clashed constantly, the toxic atmosphere in the court eventually forcing Bismarck to resign in 1890. His replacement – Leo von Caprivi – was far more in step with Wilhelm's vision, fatally letting the Reinsurance Treaty lapse – pushing Russia towards France – in favour of a friendship with Britain that would never come to fruition, leaving Germany isolated in Europe by 1914.


German chancellor Otto von Bismarck in the year he left office

4 January 1894

FRANCE AND RUSSIA JOIN FORCES

France and Russia form a military alliance

A less likely love affair it would be difficult to imagine: democratic republican France and archaic autocratic imperial Russia cosy up despite public outcry in both countries.

France felt encircled by Britain and Germany who were enjoying a rare cosiness at this point, while likewise Russia saw itself threatened by the British Empire in central Asia, and the Far East, and by Germany's allies Austria-Hungary in Europe.

Where past treaties were agreements between governments designed to keep them from interfering in each other's business, this was primarily a military pact with a guaranteed military response if the other was attacked.

With no room for ambiguity, the Franco-Russian Alliance was the first of many that would bind the military powers of Europe together like mountain climbers, just waiting for one to fall and the rest to go tumbling after.

The Avenue Nicholas II in Paris, named in honour of the Franco-Russian Alliance

29 December 1895

Germany is warned off in southern Africa

Though the competing British and German interests around what is now South Africa had been a clear flashpoint for decades, the British Cape Colony's failed raid on the independent Transvaal Republic that would eventually lead to the Boer War – though unsanctioned by Britain – received the motherland's firm backing.

Kaiser Wilhelm II drafted a letter of congratulation to Boer president Paul Kruger that was celebrated by the German press and sparked outrage in its British counterparts. Germany's urbane ambassador to London was shocked when the Foreign Office's bullish Sir Francis Bertie informed him that wiping out the German navy would be "child's play for the English fleet".

Very much aware of their limitations, their political isolation and of Britain's overreaction, Wilhelm II resolved to increase the power of the German Imperial Navy and to treat Britain no longer just as a potential ally but also as a potential threat.

Transvaal president Paul Kruger in 1898

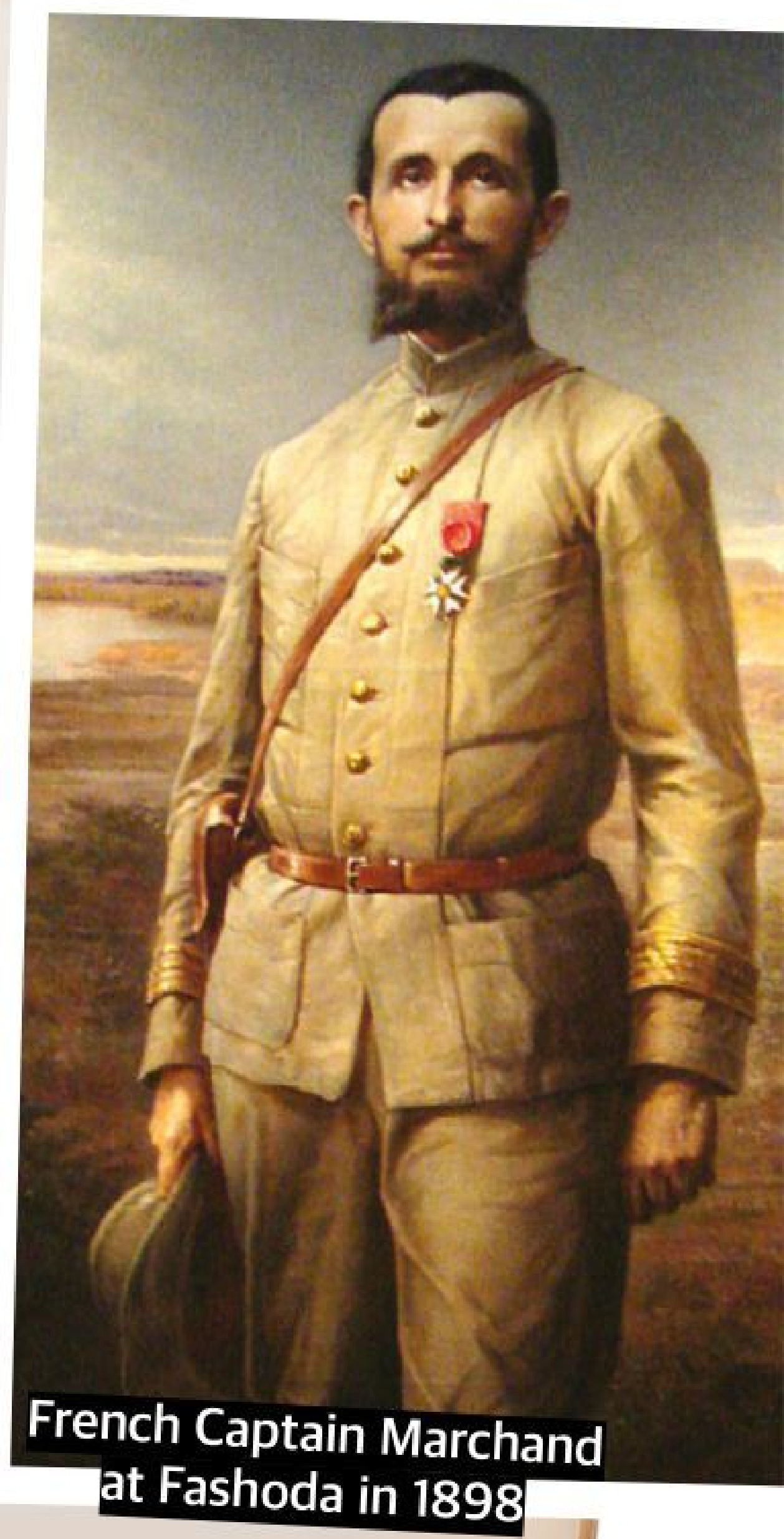
10 July 1898

Britain and France size each other up

The scramble for Africa reached crisis point as France and Britain coveted control of the Nile to link up their African colonies. France especially felt threatened by Britain's occupation of Egypt in 1882 and quickly dispatched a small force to Fashoda (now Kodok in south Sudan) where the lines of both powers' empires intersected.

After a daring 14-month trek across Africa, the French force seized Fashoda on 10 July 1898, however reinforcements turned back, and a flotilla of British gunboats led by imperialism's posterboy, Horatio Herbert Kitchener, arrived at the isolated fort – both sides politely insisting on their right to be there, and rather nobly agreeing to fly British, French and Egyptian flags over the fort in compromise. At home, meanwhile, talk of war gripped both parliaments – only when it looked as though victory would hinge on sea-power, putting the lighter, faster French fleet at the mercy of the heavier British one, did the French withdraw and an official boundary was agreed between the two powers.

The normalisation of British and French relations after the Fashoda Incident, and the clear demarcation of influence, relieved the constant pressure between the two to an extent, setting them off from hundreds of years of semi-regular bloodshed on a new course towards alliance.


French Captain Marchand at Fashoda in 1898

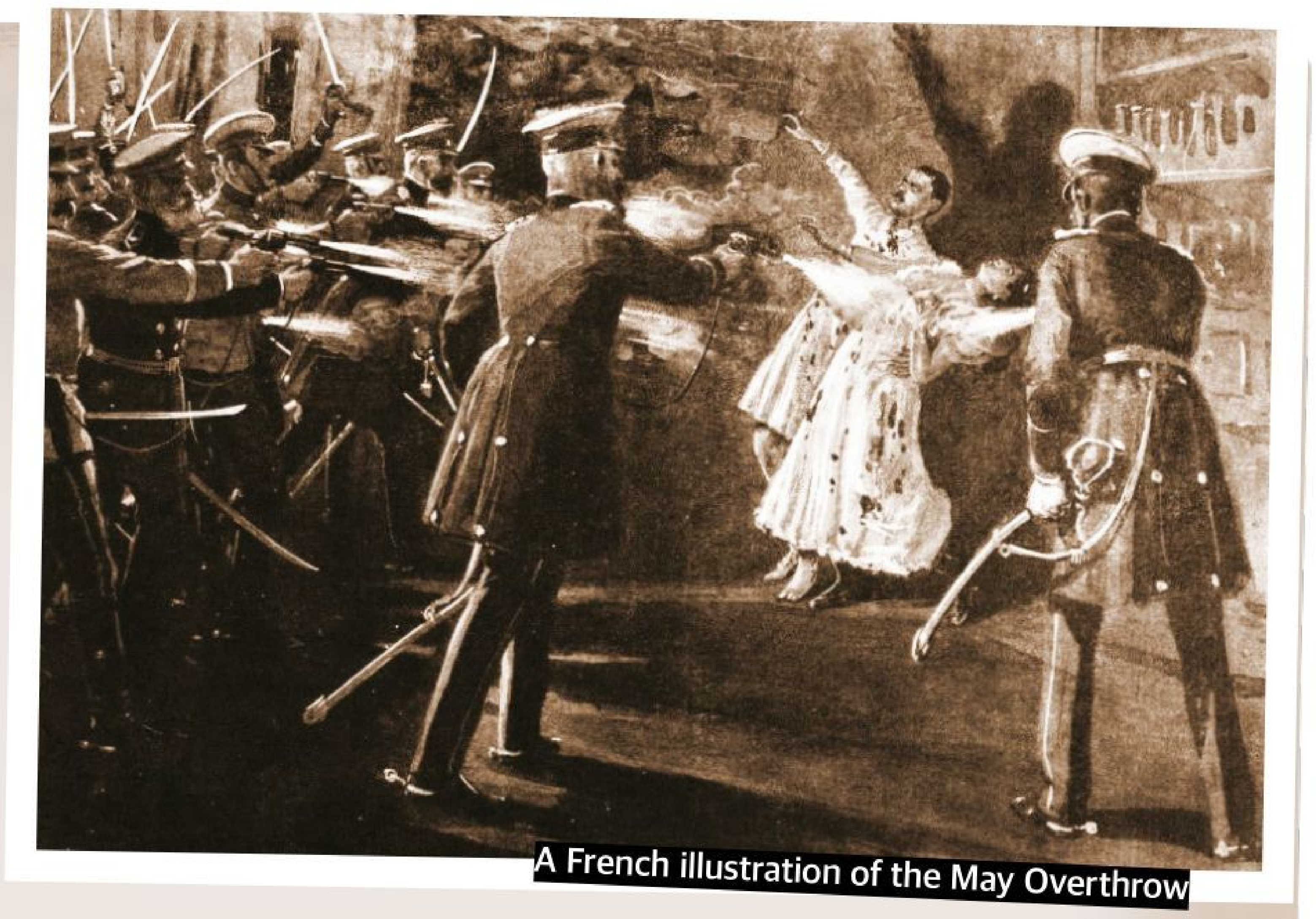
11 June 1903

THE BLACK HAND STRIKES

Austro-Serbian friendship dies with Serb king at hands of secret society

In a scandal that shocked all of Europe, Serbia's deeply unpopular and pro-Austrian king Alexander Obrenović and his wife were murdered by a cabal of army officers who forced their way into the palace and rousted the royal couple from their hiding place.

Perpetrated by the Black Hand, a radical nationalist secret society dedicated to absorbing 'Serb' lands (whether Bosnian, Macedonians or Croatians liked it or not) from the rule of the Austro-Hungarian and Ottoman Empires, the Black Hand were already so entrenched in Serbia's powerful military that the new government refused all foreign diplomatic pressure to have them arrested for fear they'd be the next rulers to be brutally murdered. One of the key conspirators – Dragutin 'Apis' Dimitrijević – would later become the leader of the Black Hand and Serbia's head of military intelligence – a powerful combination that would allow him to organise a failed attempt on the life of Austro-Hungarian Emperor Franz Josef in 1911, and a more successful and infamous attack on Franz Ferdinand three years later.



A French illustration of the May Overthrow

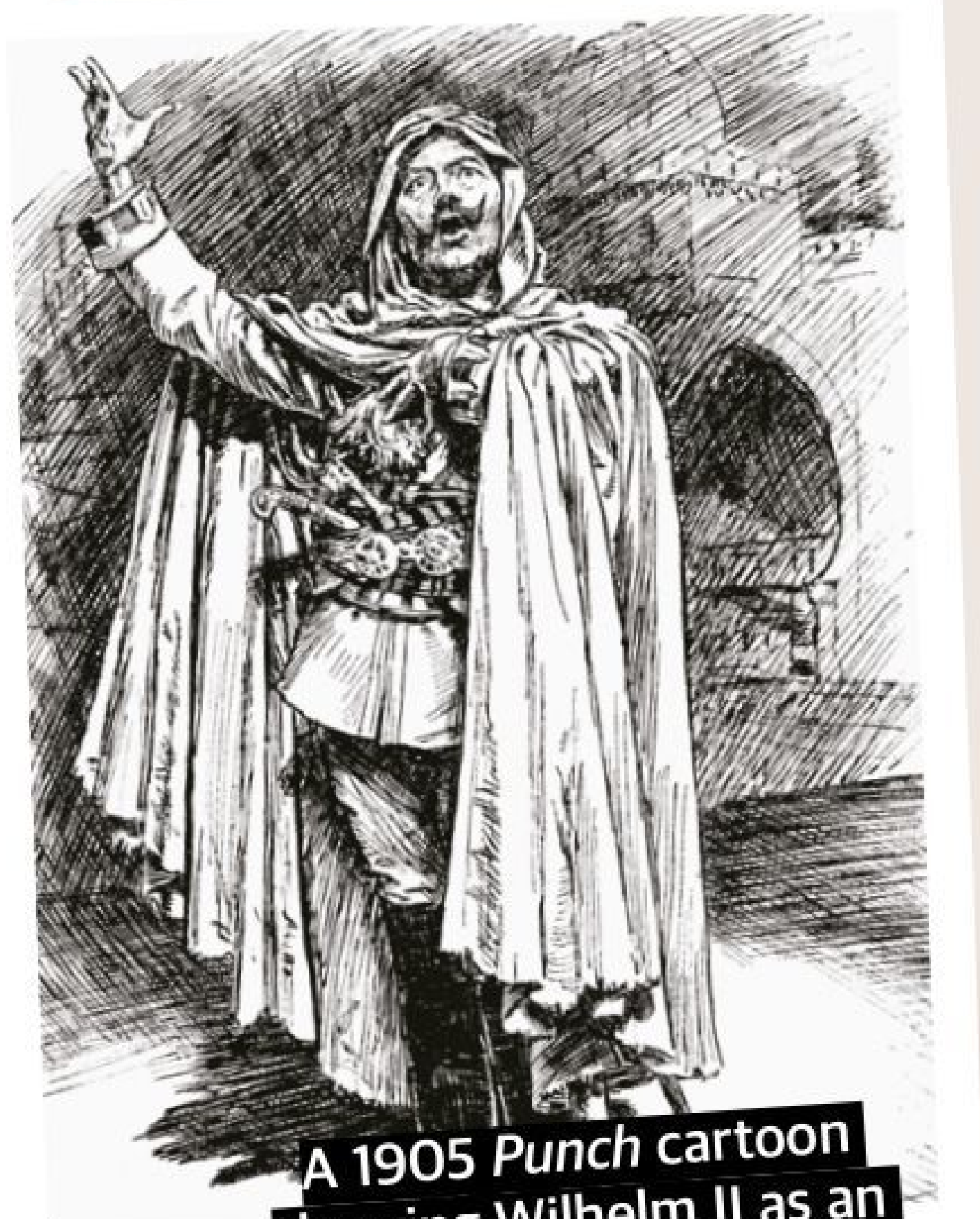
31 March 1905

THE KAISER PAYS A VISIT TO TANGIER

Germany's attempt to drive a wedge between Britain and France fails

Keen to test the extent of France and Britain's Entente Cordiale – signed 8 April 1904 and putting an end to colonial rivalry in Africa and Asia – Wilhelm II arrives in Tangier to deliver a speech in favour of Moroccan independence – much to the chagrin of France, who planned to take over Morocco as a protectorate.

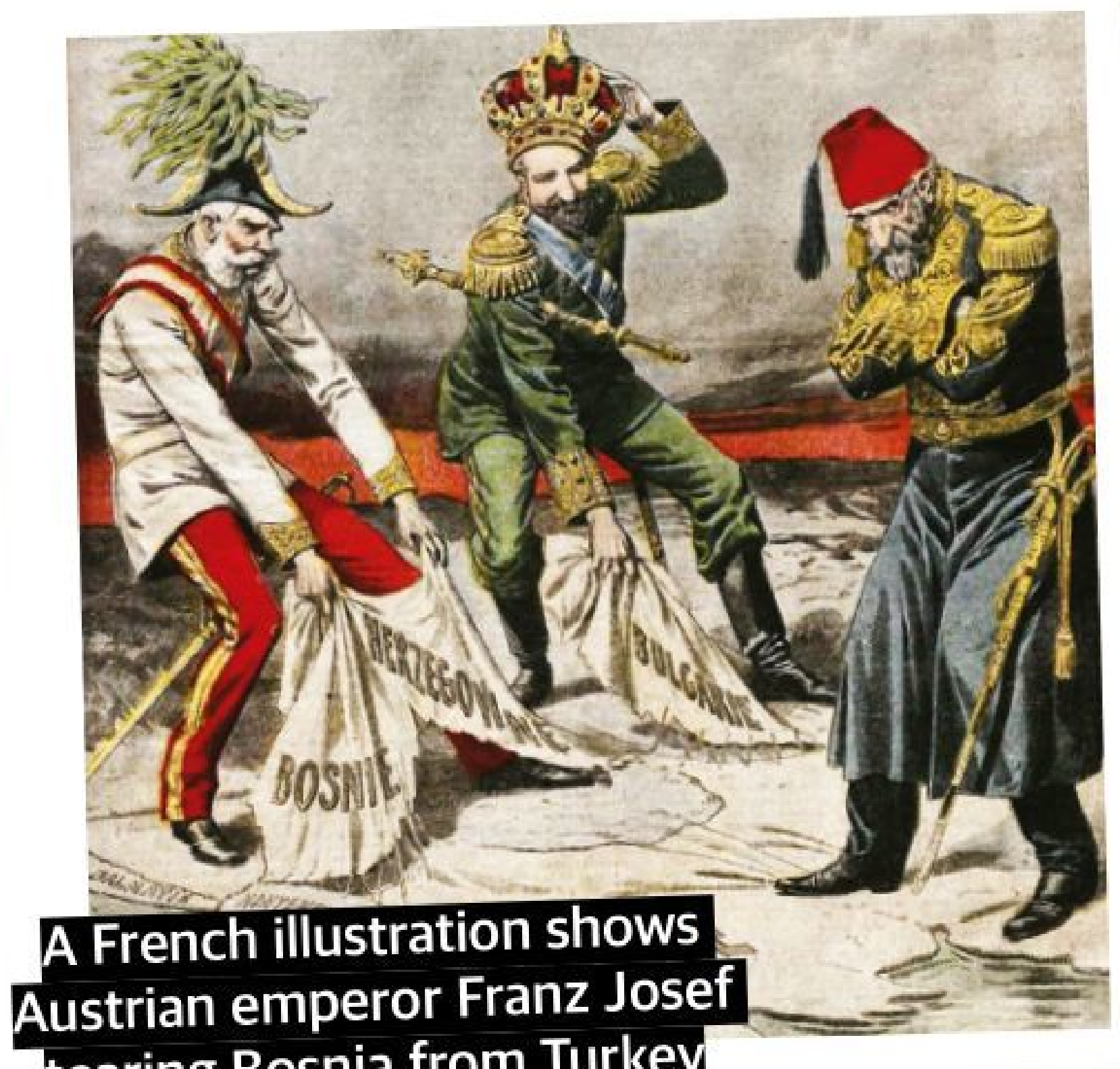
The Kaiser expected to use the ensuing conference to resolve the situation as an opportunity to magnanimously grant France limited control, bringing them closer to Germany and isolating Britain, but to his surprise British foreign secretary, Sir Edward Grey, backed the French in the strongest possible terms, and it's Germany that, once again, came away isolated. The Tangier Crisis paved the way for the Agadir Crisis in 1911, which despite higher stakes – a German gunship off the coast, and French and Spanish troop deployments on Morocco's streets – the aims of the Germans were the same, and so were the results: Franco-British military dependency increased, as did the French hold on Morocco and Germany's political encirclement.



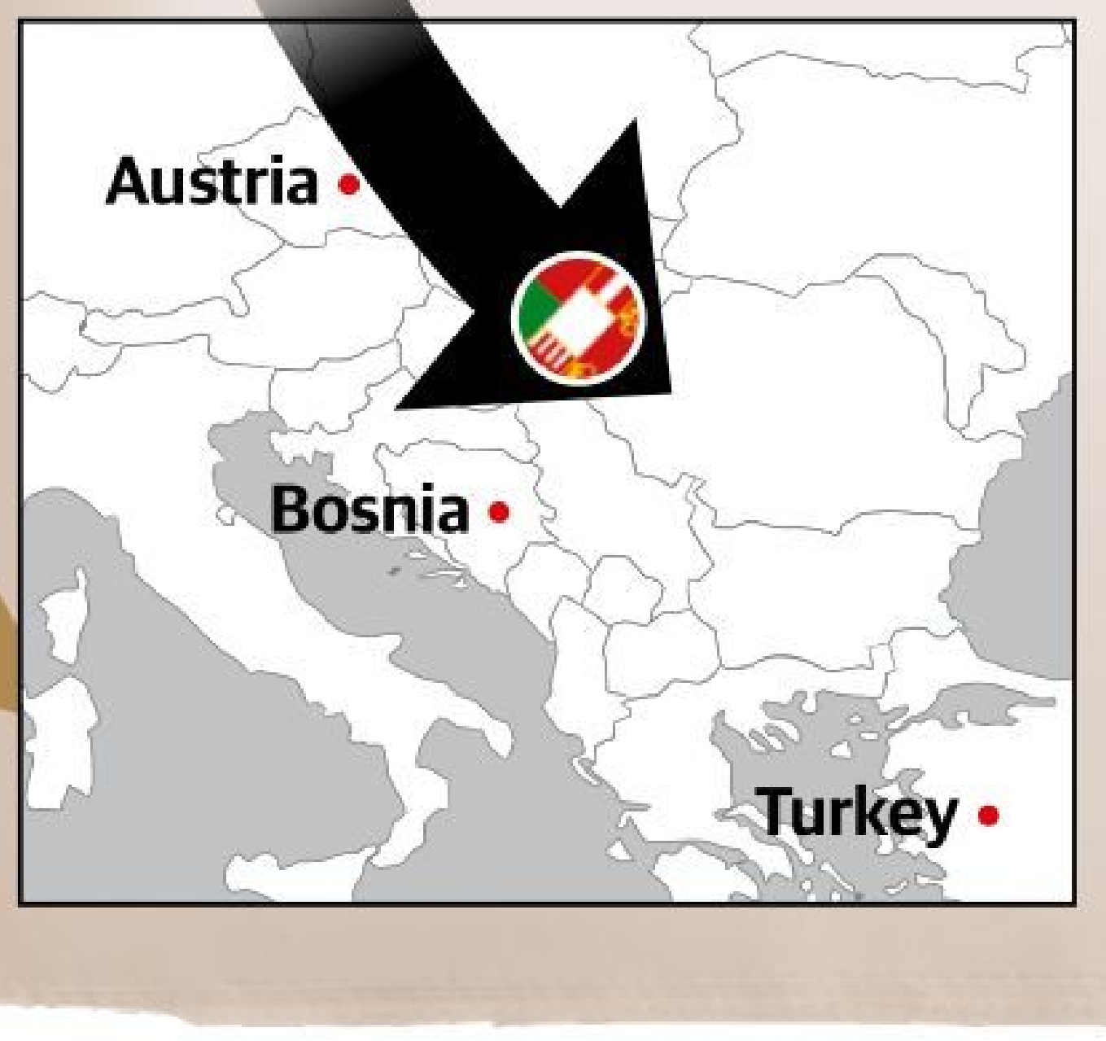
A 1905 *Punch* cartoon showing Wilhelm II as an unlikely friend of Morocco

6 October 1908

Austria takes Bosnia



A French illustration shows Austrian emperor Franz Josef tearing Bosnia from Turkey



Austro-Hungarian troops had been in the Ottoman province of Bosnia and Herzegovina since 1878 running it in all but name. In a series of letters and a six-hour secret meeting, Russian foreign minister, Alexander Izvolsky, and Austro-Hungarian foreign minister, Alois Aehrenthal, agreed a revision to the treaty of 1878, allowing Austria-Hungary full control of Bosnia. When the Austrians announced their intent Izvolsky acted as outraged as the rest of Europe's political movers and shakers (but not nearly as outraged as Serbia) and only when Vienna threatened to release secret records proving Izvolsky's duplicity did Russia back down and force Serbia to accept the annexation.

This affair prompted a shift in the direction of Serbian nationalism and public outrage that had so far been more preoccupied with Macedonia and Kosovo. Italy, meanwhile – part of the Triple Alliance with Austria-Hungary and Germany – had been long promised territory on the Croatian coast if Austria were to take Bosnia. Affronted, the Italian government would cite this breach of trust when they joined WWI on the side of the Triple Entente in 1915.

5 September 1905

Japan checks Russian colonialism

Japanese cavalry crossing the Yalu River into Russian-held Manchuria

Imperial Russia's colonial ambitions in Asia finally overreached themselves, and the Japanese launched a devastating night attack on 8 February 1904 against the fleet anchored at Port Arthur (now Lüshunkou).

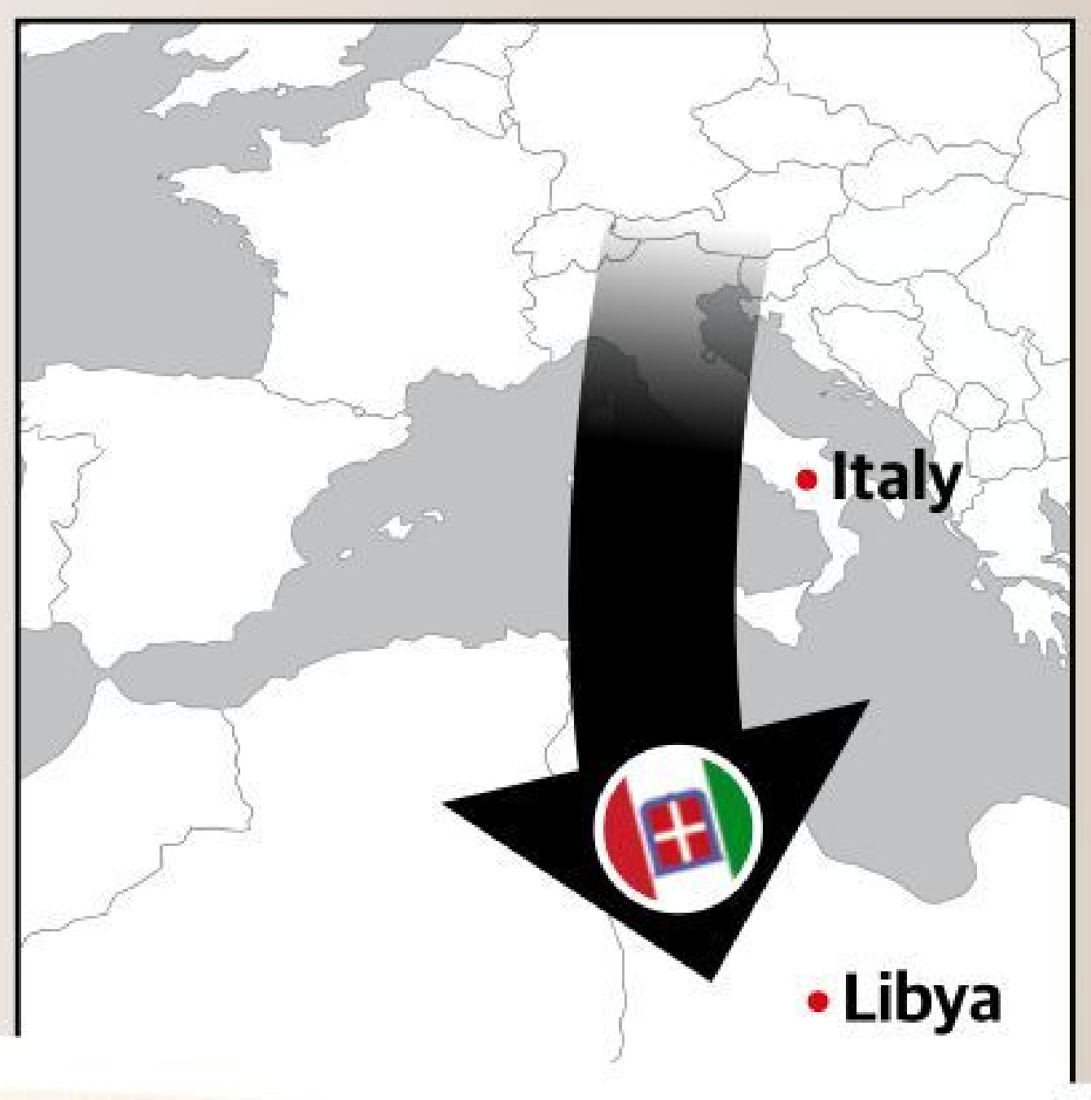
This blow to Russia not only brought the Tsarist autocracy to the brink with the Revolution of 1905, but forced Russia to look to the west to expand its influence. The factions in the imperial court fixated on increasing Russia's influence over the Slavic and Orthodox Christian nationalities were strengthened, and foreign policy became increasingly fixated on Bulgaria and Serbia especially. The desire to gain control over the Turkish Straits which would allow the Russian fleet in the Black Sea access to the Mediterranean also grew.

Manchuria
Japan

29 September 1911

ITALY STARTS A FEEDING FRENZY

Italy invades Libya and kicks off the First Balkan War



Though Britain and France had carved off Egypt and Morocco from the fringes of the Ottoman Empire, Italy's sudden invasion of Libya - one of the empire's central provinces - stunned the world. The superior technology of the Italians and their use of air reconnaissance saw them quickly take key cities before becoming bogged down in guerrilla warfare and counterattacks, while the brutal naval assault on the Dodecanese - the southernmost Greek islands - bloodied the Turks and forced them on the defensive.

While it kicked off a chain reaction (goaded on by the Russian ambassador to Belgrade) in the Balkans that led to the First Balkan War, the Italian seizure of Libya demonstrated a shift in Italy's foreign relations away from its traditional allies. Rather than consult its Triple Alliance partners Germany and Austria-Hungary - both invested in the integrity of the Ottoman Empire - they cleared the campaign with France and Britain beforehand instead.

Italian artillery near Tripoli, Libya, in 1911

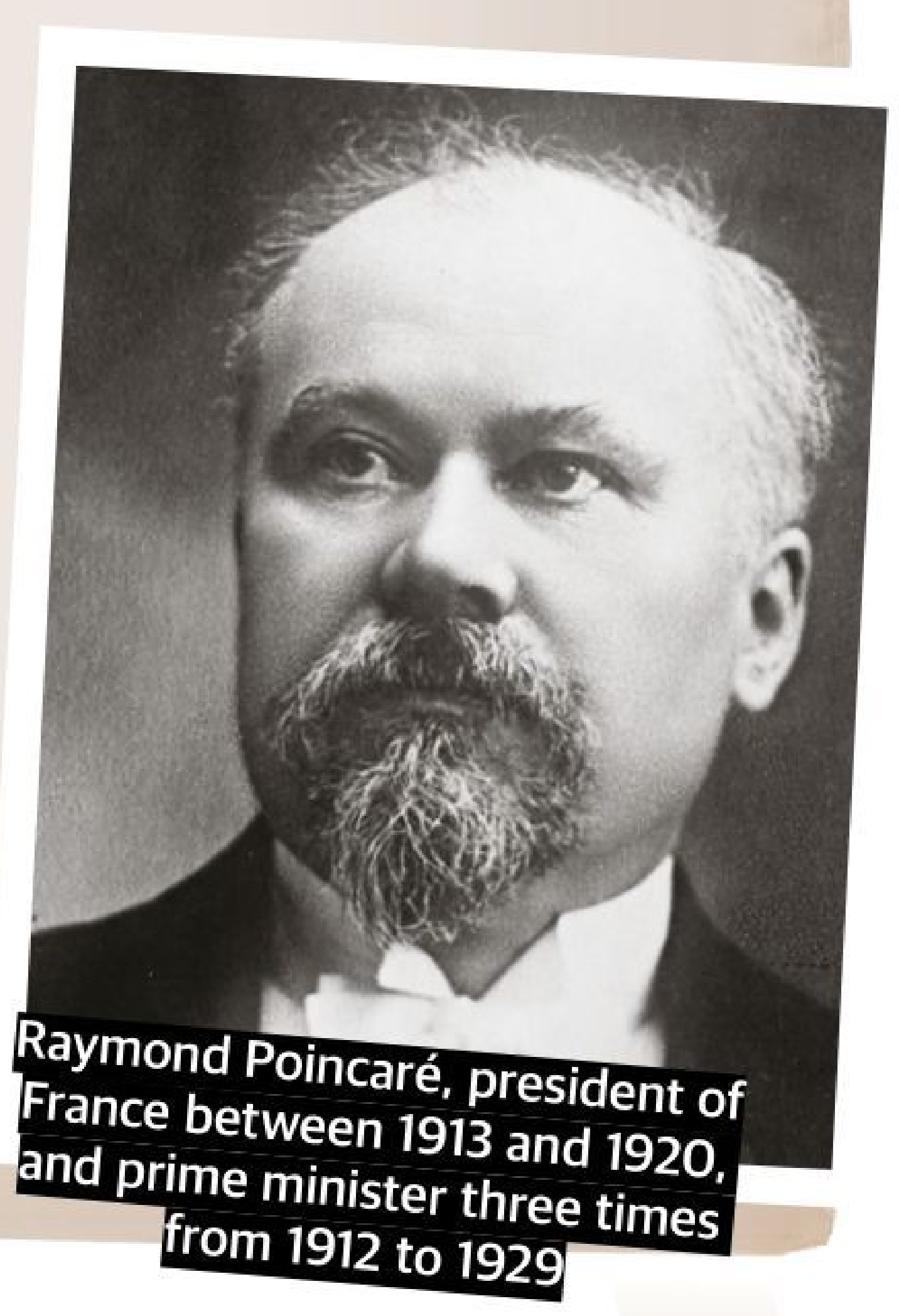
21 January 1912

France votes 'oui' for nationalism

Voted in on a wave of nationalism following the Agadir Crisis in July 1911, hardline anti-German prime minister Raymond Poincaré presided over a lurch to the right. Made president the following year he consolidated control of foreign policy and the Higher Council of War, and dispatched veteran statesman Théophile Delcassé - dubbed "the most dangerous man for Germany in France" by Wilhelm II - as ambassador to Russia to better co-ordinate Franco-Russian military strategy.

As Poincaré's government prepared for war he also made it more likely, telling Russian ambassador, Alexander Izvolsky, that any conflict with Austria-Hungary arising from the First Balkan War would have France's backing.

The hawks in the French government calculated that not only would a war over the Balkans be the surest guarantee that Russia would commit all of its forces to the field, but an Austro-Hungarian invasion of Serbia would bog down the Dual Monarchy, leaving the allies free to tackle Germany.


Raymond Poincaré, president of France between 1913 and 1920, and prime minister three times from 1912 to 1929

12 February 1912

ANGLO-GERMAN ARMS TALKS SINK

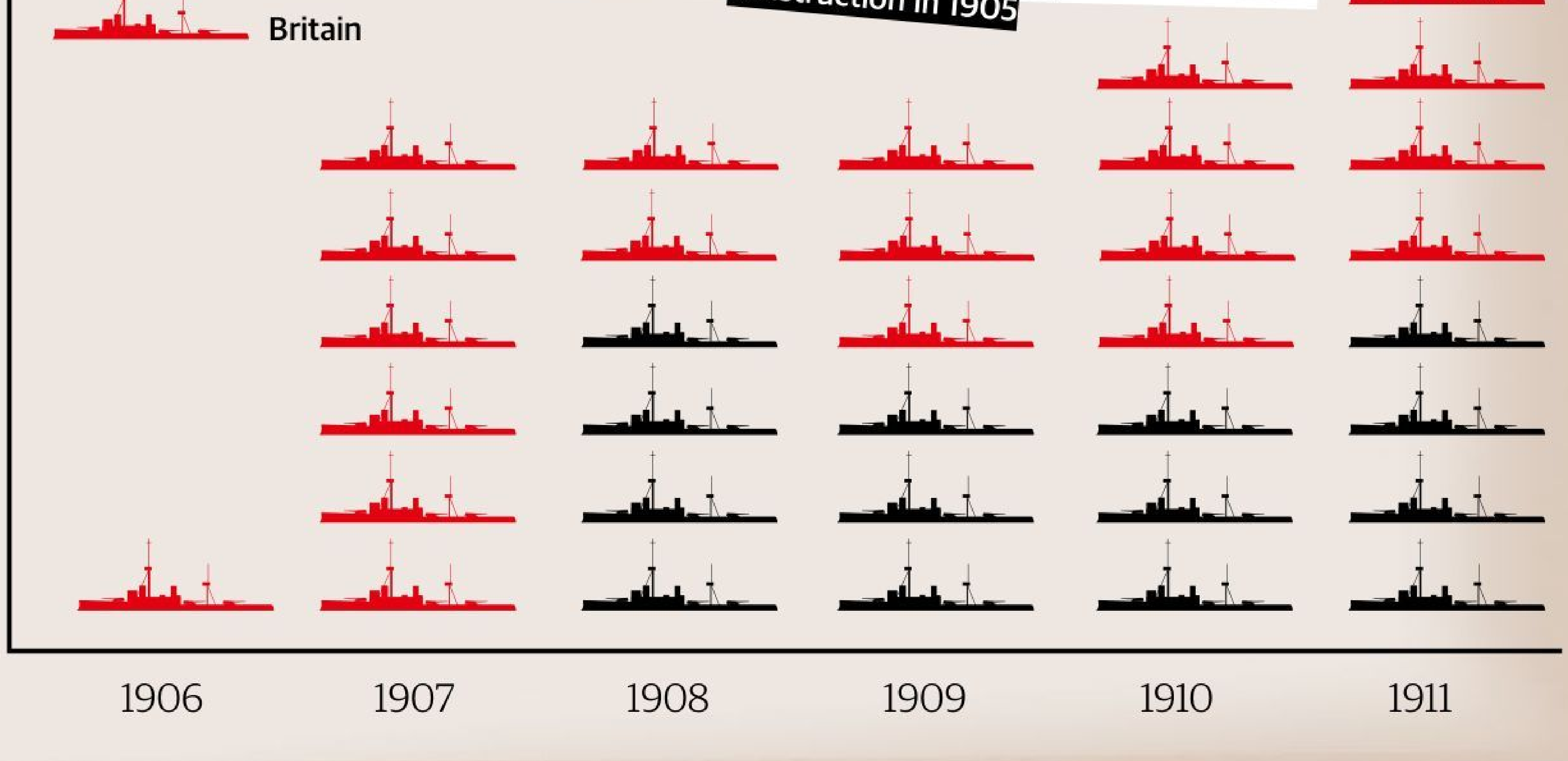
Negotiations for a cap on boat building are rejected

With both powers exhausted by boat-building fever that had formed the backbone of Britain's national self-esteem and the key German status as its equal, the war secretary, Richard Haldane, paid a secret visit to Berlin to try and halt the escalation.

The balance of national egos was simply too fragile. Germany wanted a guarantee of British neutrality in any future conflict, and Britain saw its own naval superiority as something they didn't have magnanimously gifted by Germany in exchange.

As a result, Haldane returned empty handed, the naval buildup continued unabated and, more importantly, Germany pushed Britain further into a military death-grip with Russia and France.

HMS Dreadnought under construction in 1905



30 September 1912

RUSSIA FLEXES ITS MILITARY MUSCLE

As the First Balkan War gets underway, Russia points its guns towards Austria

With the Balkan League of Serbia, Bulgaria, Greece and Montenegro gearing up to snatch territory from the Ottoman Turks in the wake of Italy's invasion of Ottoman-held Libya the year before, their great protector – Russia – made its stance clear.

If Austria-Hungary was alarmed by this potential shakeup of the borders, the rapid mobilisation of 50,000-60,000 Russian reservists along the Polish border with Austria-Hungary alarmed them more. This was the first major aggressive move by Russia against its rivals, breaking with the tradition of covert deal-breaking that would foreshadow the events of 1914, and the robust defence of Serbia that would swallow much of the planet in war.

Russian foreign minister, Sergei Sazonov, observed that were it to come to conflict, "We can probably rely on the real support of France and England."

Russian foreign minister from 1910 to 1916, Sergei Sazonov

14 December 1913

Constantinople looks to Germany

Russia's lust for the Turkish Straits may have been pushed to second place during the Balkan wars, but they hadn't lost sight of their long-term goal. The arrival of Otto Liman von Sanders' German military mission on 14 December 1913 to train and command the first corps of the Ottoman army following humiliating Turkish defeats in the Balkans gave them even greater cause for concern than the presence of a British admiral doing the same job with the Ottoman navy.

Though Germany compromised heavily to keep the diplomatic crisis from boiling over (which in turn left the Germans with a sense of resentment), Russia's lack of backing from even the ardently anti-German Delcassé was a potent reminder to Russia that, despite the Triple Entente, its allies had very different priorities.

Viewing for the first time Germany, and not just Austria-Hungary, as a direct threat to Russia's aims, they realised that the only way they could gain control of the Turkish Straits would be against the backdrop of a wider European war, in which France and especially Britain were bound to Russia.

Liman von Sanders pictured with his Ottoman staff officers in 1914

17 October 1913

SERBIA DIGS IN OVER ALBANIA

The Second Balkan War teaches Austria the value of brute force

The success of the Balkan League in the First Balkan War alarmed Austria-Hungary no end. Now the Second Balkan War had begun, with each combatant eager to consolidate its gains. Serbia – the chief cause of their anxiety – had won crushing victories in Macedonia and then marched into Albania and Kosovo to hold vast swathes of territory. Reports of massacres followed, and even rumours that the Austro-Hungarian consul in Prizren, Kosovo, had been abducted and castrated.

Alternately claiming ignorance of any occupation and then lying about withdrawal, Austria-Hungary grew convinced that Serbia couldn't be bargained with and would only respond to force. On 17 October 1913, Austria-Hungary gave Serbia eight days to leave the contested territory or they would face military action, and Russia advised them to do as they were told. By 26 October Albania was free of Serbian troops and the success of the Albanian ultimatum – and the demonstration of a clear limit to Russia's support – would lead Vienna to try and repeat the performance in 1914, with very different consequences.

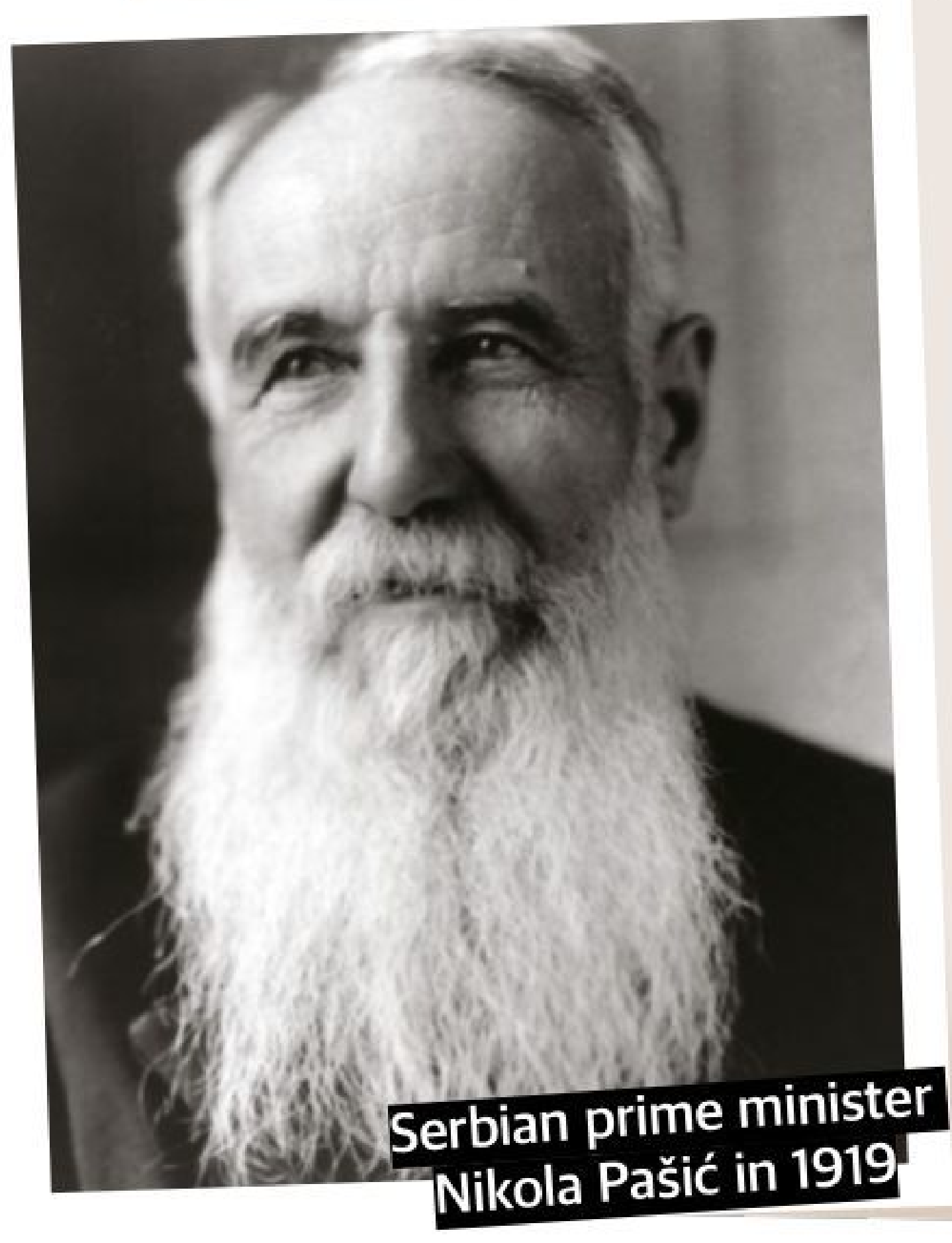
Serbian soldiers in Macedonia during the Second Balkan War

21 June 1914

SERBIA ISSUES AN OPAQUE WARNING

Serbian prime minister fails to warn of plot against Franz Ferdinand

In June 1914, the Serbian prime minister, Nikola Pašić, sent a telegram to the Serbian legation in Vienna warning of a plot against Franz Ferdinand. Belgrade's man in Vienna, Jovan Jovanović, then met with the Austro-Hungarian finance minister on 21 June 1914 to warn in the vaguest terms that a visit by the Archduke could end in tragedy. That Pašić didn't communicate the threat directly to the Austro-Hungarian foreign minister, instead choosing the ultra-nationalist Jovanović – who is rumoured to have commanded guerrilla bands in Bosnia after annexation – who could be relied upon to tell someone further from decision making and probably tell them as unconvincingly as possible, suggests that this might have been a warning Pašić felt he needed to be seen to issue, but didn't necessarily want to be heard.



Serbian prime minister Nikola Pašić in 1919

28 June 1914

Ferdinand is assassinated

On 28 June 1914 the Archduke Franz Ferdinand – nephew and heir to Emperor Franz Josef of Austria-Hungary – along with his wife – Duchess Sophie – were shot and killed while inspecting the troops in the Bosnian capital, Sarajevo. The man pulling the trigger was radicalised Bosnian-Serb student, Gavrilo Princip – an assassin from the secret military society, the Black Hand, which was equipped and supported by conspirators within the Serbian army.

Though unpopular, the Archduke's death provided all the pretext the Habsburg court needed to curtail the belligerent Serbia. Beyond the excuse it provided, Franz Ferdinand was the leader of a think-tank within the Austro-Hungarian military that advocated reorganising the empire along federal lines.

A more representative Austria-Hungary could have silenced demands for independence from the Slavic communities in the empire – many of whom were still relatively loyal to Franz Josef himself, just critical of the state – loosening Serbia's influence in Croatia and Bosnia. It also would have undermined Russia's self-proclaimed mission to 'protect' the Slavic and Orthodox Christian people. But it was never to be.

Gavrilo Princip arrested by Austro-Hungarian police shortly after the shooting

23 July 1914

AUSTRIA-HUNGARY DECLARES WAR!

Political alliances lead to domino-effect war

Concerned that public opinion would not back war, the Austro-Hungarian government – champing at the bit to knock the Balkan upstart down a peg or two since 1912 – prepared an ultimatum that would be near impossible for Serbia to accept. Wilhelm II in Berlin voiced his support for Austria-Hungary, advising the German ambassador to Vienna, "We must finish with the Serbs, quickly. Now or never!" Indeed the conditions were too humiliating for Serbia to agree to and, on 28 July 1914, Austria-Hungary declared war on Serbia. Like a chain of dominos tumbling in succession Russia, Germany, France, Britain and all their overseas dominions were plunged into war. Italy, the Ottoman Empire, Japan and eventually the US would follow, as World War I progressed.

German trenches on the Aisne River during World War I

Assassination of Archduke Franz Ferdinand

Sarajevo, Bosnia and Herzegovina 28 June 1914

Of all the assassinations throughout history, that of Archduke Franz Ferdinand, heir to the throne of Austria-Hungary, was both one of the most climactic and far-reaching in terms of consequences. The shooting of Ferdinand on 28 June 1914 in Sarajevo, the modern-day capital of Bosnia and Herzegovina, shook the entire world and was a major step towards the outbreak of the First World War. Many historians argue that the shooting led to the deaths of almost 10 million soldiers and countless other civilians.

The assassination was born out of a desire for Austria-Hungary's South-Slav provinces to be split from their vast empire and incorporated into Greater Serbia; a desire which had led to heightened disputes between Serbia and its neighbouring countries. This came to a head in late 1913 when Bosnian Orthodox Serb Danilo Ilić, the leader of a Serbian Black Hand terrorist cell in Sarajevo, decided to go and speak to one of the organisation's founders – Serbian Colonel C. A. Popovic. The Black Hand was a secret military society tasked with reclaiming the historical Serbian territories currently controlled by Austria-Hungary or other powers. Its motto was 'Unification or Death' and it specialised in covert operations designed to further Serbia's cause. However, Ilić no longer believed engagement in such a manner would lead to success, making a case to Popovic that a campaign of direct action should be taken instead. After temporarily considering the Governor of Bosnia as an assassination target, it was eventually agreed that Archduke Ferdinand would be their victim.

The plan was to strike during the Archduke's visit to the city in June. The weaponry for the assassination arrived with a team of young Serbian and Bosnian Serb assassins that Ilić had recruited on 26 May, and by 4 June the six assassins were all in Sarajevo and ready to act. Along with a selection of hand guns, bombs and knives, Ilić also distributed suicide pills to the assassins – truly 'unification or death'. On the following day, Archduke Ferdinand was assassinated, along with his wife Duchess Sophie.

Despite the plans, the assassins and their masters in the Black Hand were caught, imprisoned or executed. The death of one man set in train a series of events that led to the Empire of Austria-Hungary issuing an ultimatum in July of that year. This included a list of demands that Serbia was to accept within 48 hours or face having Austria-Hungary's ambassador removed from the country. Serbia did not accept, and on 28 July both sides mobilised their armies. Due to a series of alliances struck between the Great Powers of Europe, this forced Russia, France, Britain and Germany, among others, to take sides and begin the most brutal, bloody and costly war that the world had ever seen.

Double Phaeton
The Archduke and his wife were riding in an open-top Gräf & Stift Double Phaeton car at the time of their assassination. This car was part of a motorcade of six vehicles, which carried among others the Mayor and Chief of Police of Sarajevo. On 28 June 1914, it was subjected to a bomb attack that wounded 20 people.

Last words

According to the memoir of Count Franz von Harrach, who was standing on the car's sideboard when the assassination took place, Archduke Franz Ferdinand's last words were "Sophie, Sophie, don't die. Stay alive for the children!", before stating when asked if he was injured "It is nothing."

Weapon of death

The weapon used by the assassin, Gavrilo Princip, was a Fabrique National model 1910 semi-automatic pistol. The gun was Belgian-made and used .380 ACP ammunition. When Princip fired on that fateful day, he did so twice from a distance of 1.5 metres, his shots hitting both the Archduke and his wife.

The Black Hand

The assassins were part of an underground splinter cell of Bosnian Serbs coordinated by Danilo Ilić, a member of the secret military society the Black Hand. The organisation's objective was to create an event that would lead to the splitting off of Austria-Hungary's South-Slav provinces from the empire.

Austria-Hungary

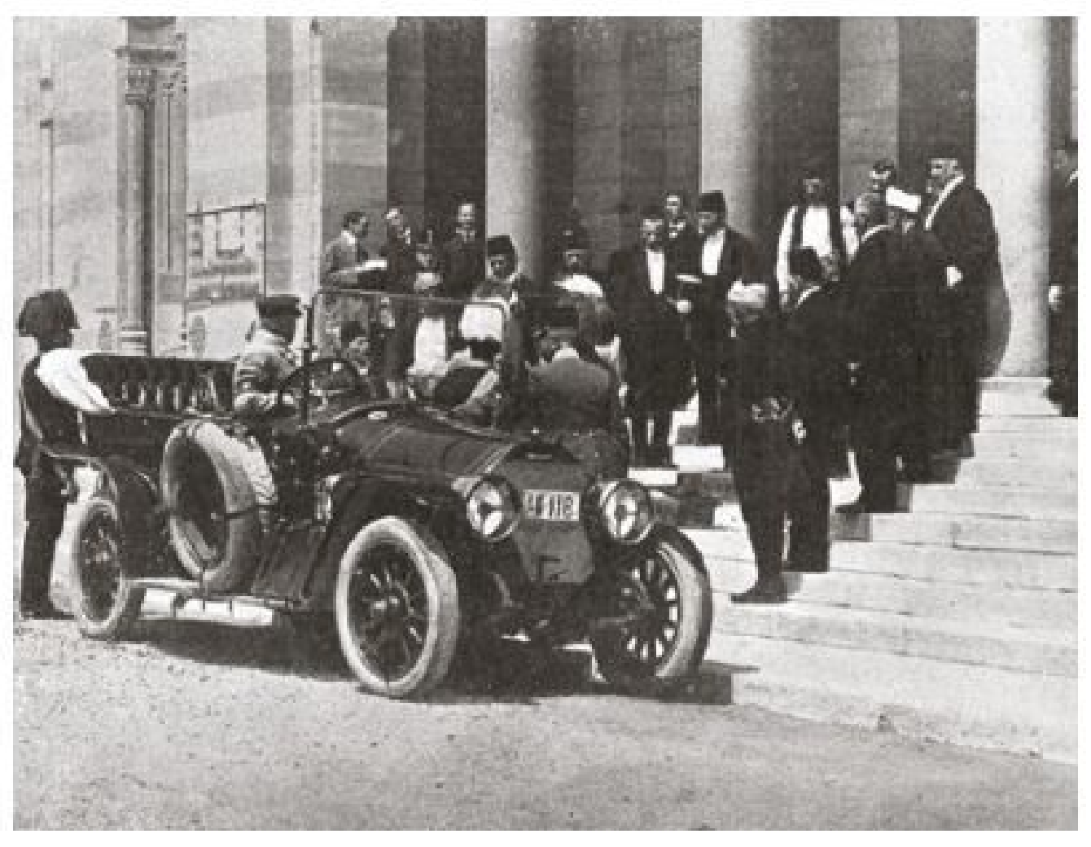
FRANZ FERDINAND

FOR HIS KINGDOM

Archduke of Austria, Royal Prince of Hungary and Bohemia Franz Ferdinand was unpopular among Serbs, who wanted to reclaim land.

Strengths A leader of great energy and physical prowess.

Weakness Distant and prone to bouts of hysteria.



1911 DOUBLE PHAETON

AN EXPENSIVE LUXURY

Offering good speed and excellent all-round visibility, the 1911 Double Phaeton was considered a luxury item for the time.

Strengths Much more mobile than foot or horse-mounted units.

Weakness Poorly armoured and cumbersome in tight spaces.

STEYR M1912 PISTOL

DURABLE AND POPULAR

The Austrian-made semi-automatic pistol offered impressive stopping power at short range and was small enough to be easily concealed.

Strengths A reliable pistol carried by Austria-Hungary police and army.

Weakness Poor shooting accuracy over long distances.

01 Motorcade forms

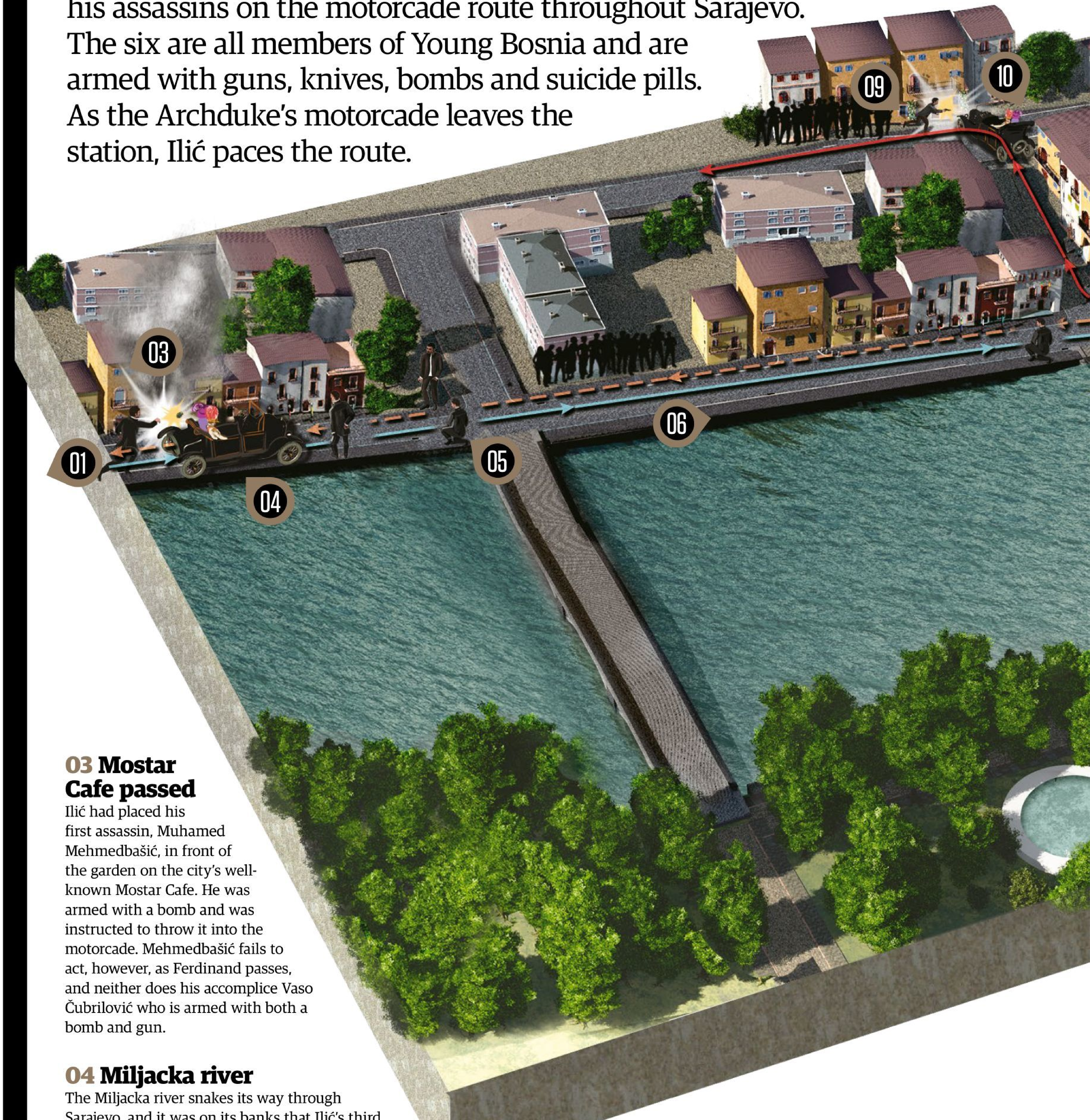
On the morning of the 28th Archduke Franz Ferdinand arrives by train in Sarajevo. Ferdinand is met by Governor Oskar Potiorek and they are led to a waiting motorcade. They step into the third car of six, a Gräf & Stift 1911 Double Phaeton, an open-topped sports car.

10 United in death

When he thought all had been lost, that he had failed his and Ilić's cause, Princip saw a second chance. Like a flash Princip bolted towards the car and drawing his semi-automatic pistol fired twice from a distance of approximately 1.5 metres. The first shot hit the Archduke in his jugular vein, the second hit his wife in the abdomen. Both were killing shots and Sophie died almost immediately, with the Archduke following minutes later.

02 The trap is set

Assassination mastermind Danilo Ilić begins to distribute his assassins on the motorcade route throughout Sarajevo. The six are all members of Young Bosnia and are armed with guns, knives, bombs and suicide pills. As the Archduke's motorcade leaves the station, Ilić paces the route.



03 Mostar Cafe passed

Ilić had placed his first assassin, Muhamed Mehmedbašić, in front of the garden on the city's well-known Mostar Cafe. He was armed with a bomb and was instructed to throw it into the motorcade. Mehmedbašić fails to act, however, as Ferdinand passes, and neither does his accomplice Vaso Čubrilović who is armed with both a bomb and gun.

04 Miljacka river

The Miljacka river snakes its way through Sarajevo, and it was on its banks that Ilić's third assassin, Nedeljko Čabrinović, was positioned to strike. Armed with a bomb, as Ferdinand's motorcade passes at 10:10am he throws the device directly at the Double Phaeton. It rebounds off the convertible's folded roof and bounces under the car following Ferdinand's. The bomb explodes, totalling the car and leaving a crater in the road. 20 passers by are hit by debris and wounded.

05 Pro patria

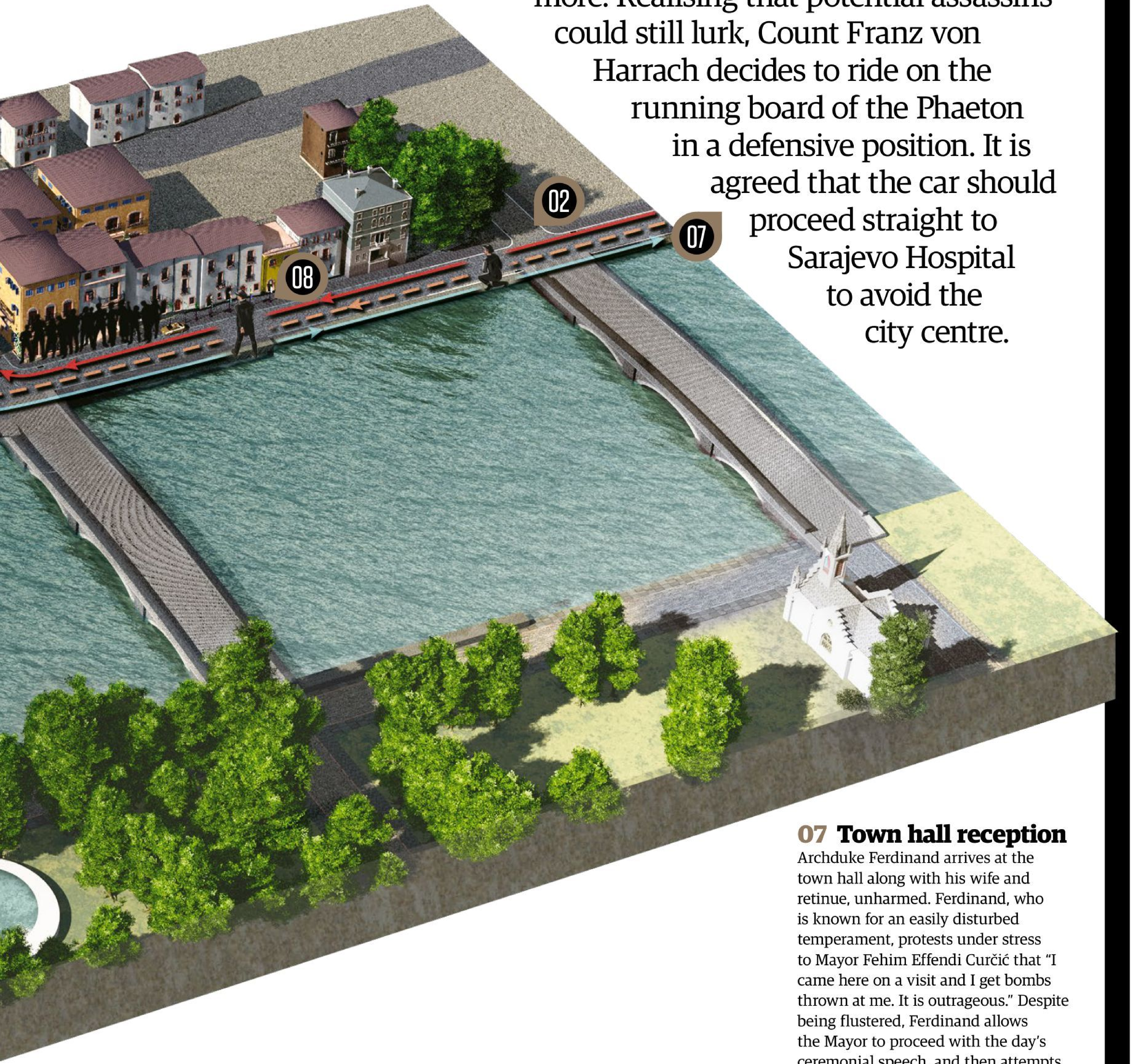
Čabrinović, deadly deed undertaken, is quickly identified and as he is closed in on, quickly swallows his cyanide pill and jumps from the banks into the Miljacka. The pill does not have the desired effect and after vomiting severely, he lives. He is dragged from the river by police and set upon by survivors of the blast.

09 Princip's second chance

Having failed to attack Ferdinand, Gavrilo Princip proceeds to a nearby food shop, Schiller's delicatessen. Upon leaving the eatery, he realises that he is staring at the royal car. The car's driver had taken a wrong turning on its way to the hospital and was now reversing with the Archduke, his wife and retinue still inside in the open-topped vehicle.

08 Added protection

By 10:45am, the reception for the Archduke is completed and he and his retinue leave the city's hall once more. Realising that potential assassins could still lurk, Count Franz von Harrach decides to ride on the running board of the Phaeton in a defensive position. It is agreed that the car should proceed straight to Sarajevo Hospital to avoid the city centre.



07 Town hall reception

Archduke Ferdinand arrives at the town hall along with his wife and retinue, unharmed. Ferdinand, who is known for an easily disturbed temperament, protests under stress to Mayor Fehim Effendi Curčić that "I came here on a visit and I get bombs thrown at me. It is outrageous." Despite being flustered, Ferdinand allows the Mayor to proceed with the day's ceremonial speech, and then attempts to brush aside the attack by thanking the people of the city for their ovations.

06 High-speed getaway

The remaining motorcade, having realised they were under attack, sped away from the blast site towards Sarajevo town hall, leaving the disabled car behind. Now travelling at high speed, the motorcade screams by Ilić's remaining three assassins – Cvjetko Popović, Gavrilo Princip and Trifun Grabež. They are unable to make their moves.

The Black Hand

DANILO ILIĆ

TEACHER TURNED KILLER

The teacher turned assassin Danilo Ilić became radicalised in the early 1900s. On his capture, he admitted everything to try to avoid death.

Strengths Well trained in planning covert operations.

Weakness No real military experience and tactical flexibility.

ASSASSINS

LURKING IN THE SHADOWS

Some were well-trained by the militaries loyal to the ruler they were trying to kill, others were mere amateurs with personal grudges.

Strengths Covert units that easily blend into crowds.

Weakness Not heavily armed and rely on shock tactics to be effective.

FN 1910 PISTOL

ENDURING WEAPON

Remaining in production until 1983, the simple design and compact reliability of the FN 1910 made it an enduring firearm.

Strengths Compact and can be fired in six-round bursts.

Weakness Poor shooting accuracy over long distances.

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The world goes to war

Discover the Great War and how it affected the whole world

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See how warfare as we know it today began to take shape

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Learn about the German soldiersdeveloped to win the war

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Explore the operations that the Indian Army assisted in

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Discover what life was like in a city in the grip of The Great War

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Take a look inside the trenches that soldiers fought and died in

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Learn how the Eastern Front saw the most casualties of WWI

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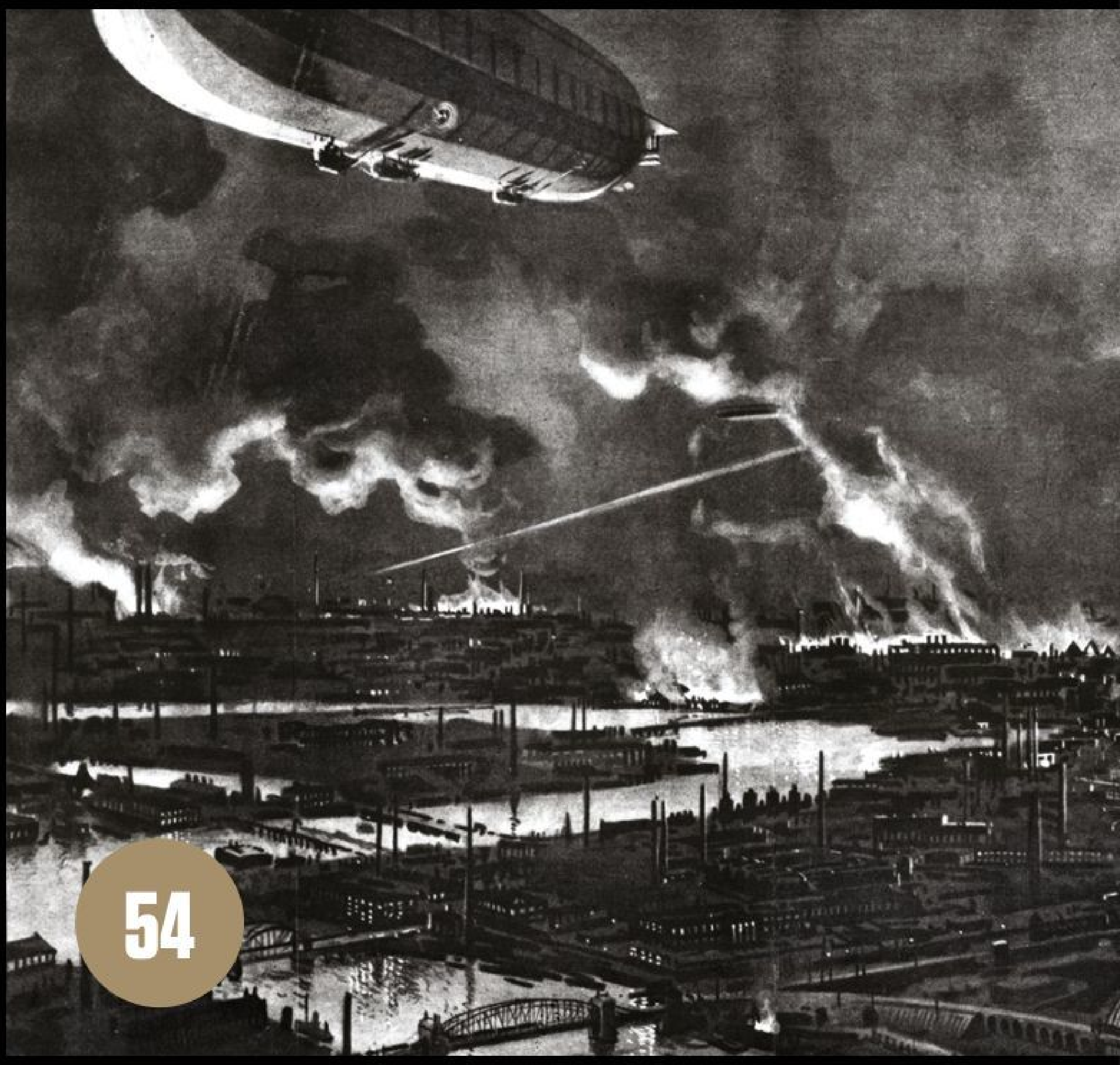
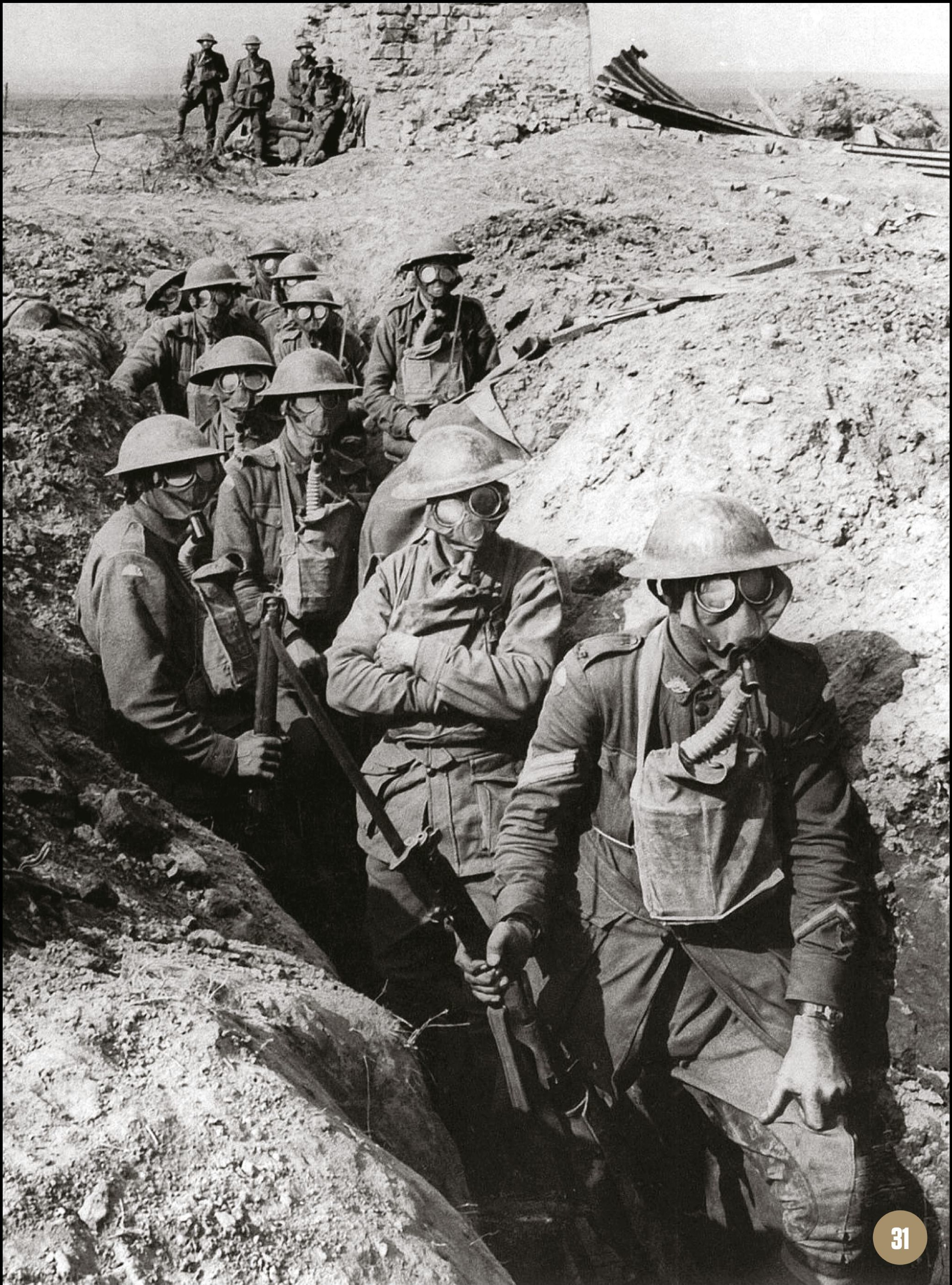
Explore the tactical blow that Germany hoped would ultimately win them the war





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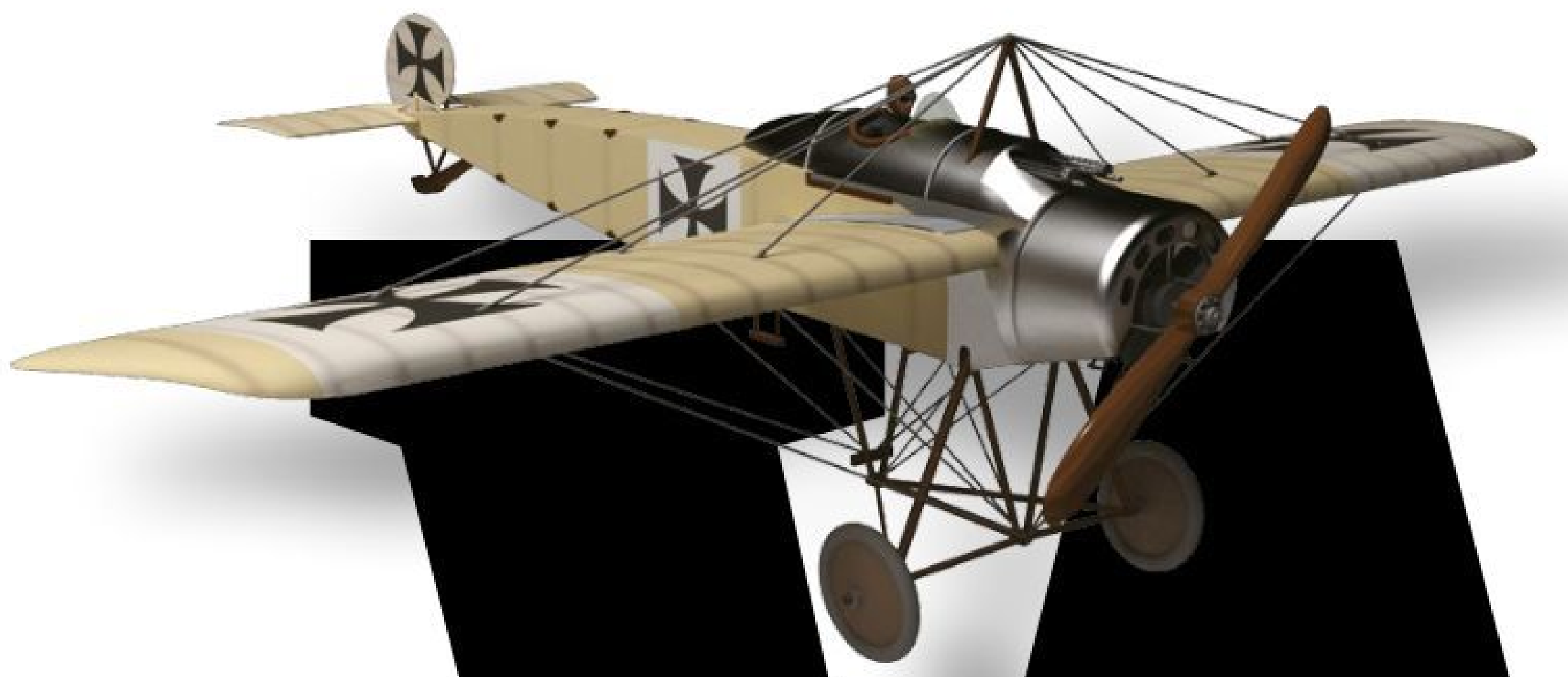


WWI FIRSTS

H.M.L.S.
"WE'RE ALL IN IT"
A
13

In a conflict that lasted four years and claimed the lives of millions, warfare as we know it today began to take shape

As the stalemate of trench warfare took hold, Europe came to the realisation that the nature of battle had changed irreversibly. In a time when technology was moving quickly, each side found at its disposal new ways to attack the enemy, and defend themselves. The development of the motor car led to the birth of the tank, uniforms swapped bright colours for muddy camouflage and chemical weapons became the newest method of slaughter on the battlefield. But amid the destruction, the war also saw the emergence of other innovations that we take for granted today, such as intelligence tests for soldiers and blood banks. It may have been called the 'war to end all wars', but it marked the beginning of a new age for science, society and politics.

Chemical Warfare

It was thought too horrible to ever use; so terrible it was made illegal seven years before the outbreak of war. Yet it became a valuable tool

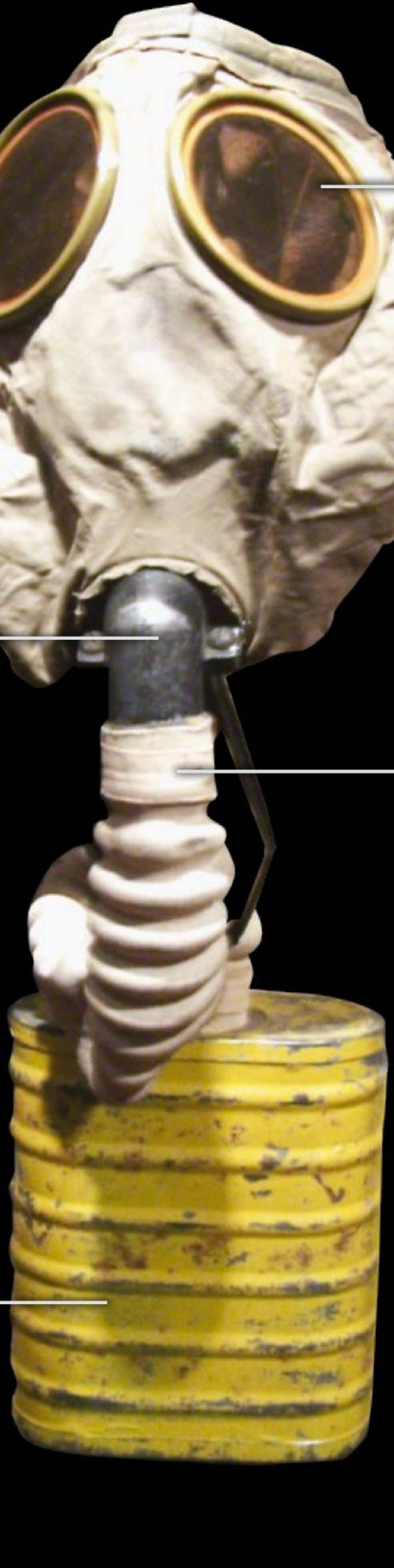
01 The use of chemical weapons is known to antiquity, and even Leonardo da Vinci gave a 'recipe' for suffocating enemies. But it was not until about 5pm on 22 April 1915 that Allied troops in Ypres saw a greeny-yellow cloud wafting across no-man's land towards them. Although illegal under the 1907 Hague Convention, the Germans had begun the large-scale use of poison gas. By the end of 1915, both sides had the noxious weapon in their armouries. Mustard gas caused the highest number of casualties. Once inhaled, it rotted the body from inside and out; the skin blistered and the pain was almost unbearable. The symptoms could last for five weeks before death, and if a soldier did survive, they were scarred for life.

Neither side was prepared for this. At first the only protection was a cloth soaked in urine clamped against the mouth and nose, but by 1915 the entire British army had been equipped with the newly designed Hypo helmet. These consisted of a flannel bag with a celluloid window, covering the entire head. Then, in 1916, troops were issued with a Small Box Respirator. This had a mouthpiece connected via a hose to a box filter. It was this design that would become the standard for many years to come.

Soldiers in gas masks at the Battle of Passchendaele in 1917

Gas masks

02 The Small Box Respirator, developed in 1916, was the first practical and effective gas mask ever made

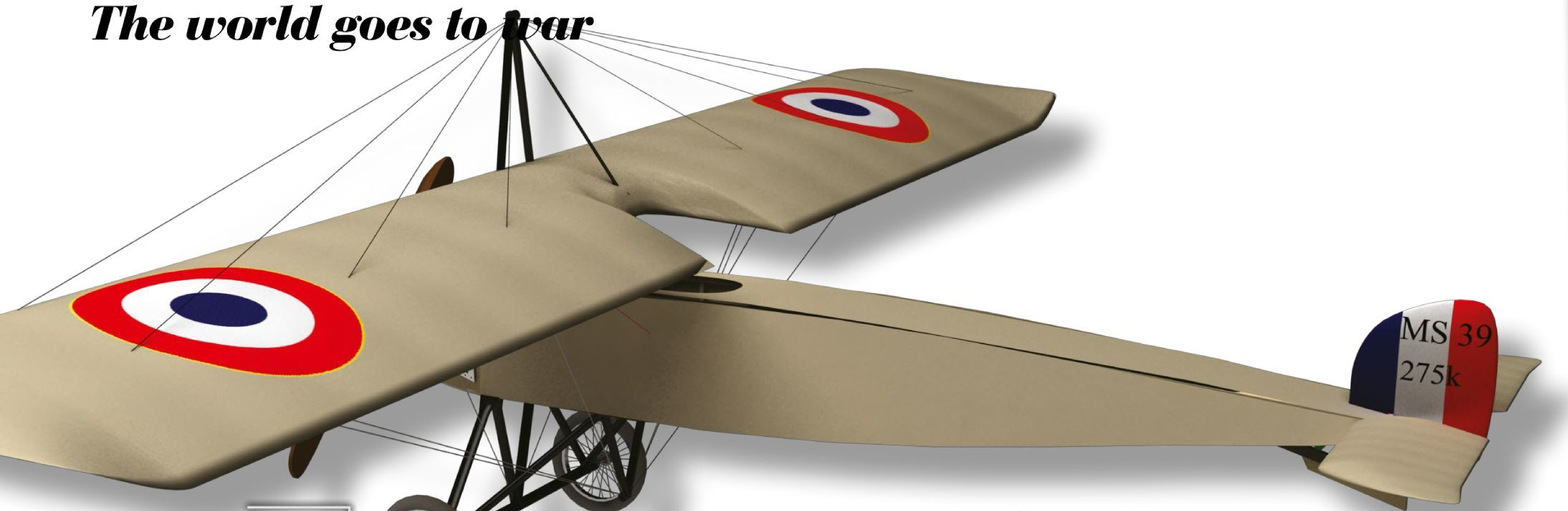


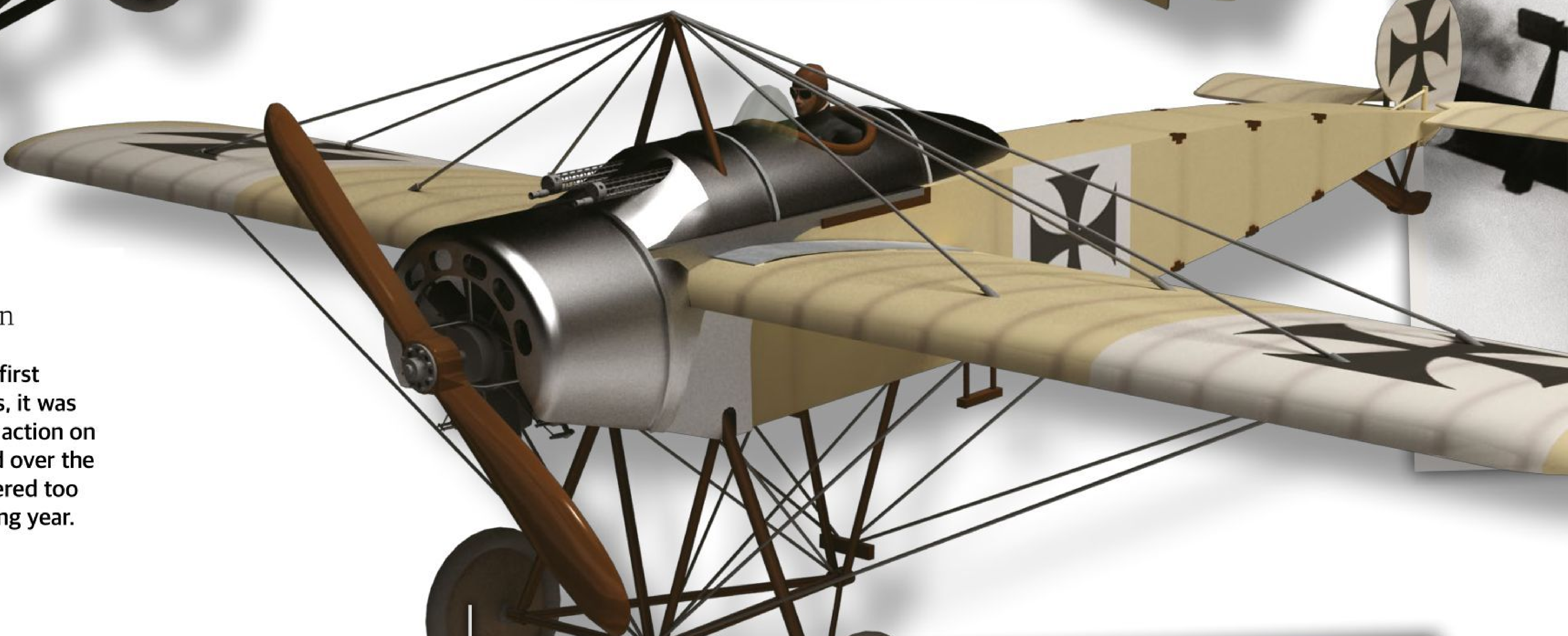
Metal pipe Exhaled air was breathed out along a metal pipe and exited via a flapper-type check valve outside the mouth.

Eye pieces These were made of cellulose. Condensation could easily be wiped away by pushing in the baggy fabric from the outside of the mask.

Box This was a metal tin filled with highly absorbent charcoal and chemicals through which air was filtered.

Hose The filtered air was inhaled through a rubber hose, which connected to a snorkel-shaped mouthpiece held between the teeth.





Vickers FB5
Country of origin: Britain Wingspan: 27ft 2in
Max speed: 70mph
The Vickers FB5 (Flying Biplane) was the world's first operational fighter aircraft. As the name suggests, it was the fifth iteration of the concept and first flew in action on Christmas Day 1914. Although the plane was used over the Western Front from February 1915, it was considered too slow for purpose and was phased out the following year.

Fokker EI
Country of origin: Germany Wingspan: 29ft Max speed: 81mph
Only 54 Fokker EIs were manufactured and, like the Vickers, it was in use for two years. Inventor Anthony Fokker produced about 40 types of plane for Germany during the war and the EI was the first to enter service with the air force. Its use was the start of the 'Fokker Scourge', when German monoplanes dominated the Western Front.

Flamethrowers had to be used from cover, so were most effective when the trenches were close together

Steel helmets

The days of wearing armour on the battlefield were thought over until soldiers encountered shrapnel

03 In times when warfare was fought hand-to-hand, no knight would go into battle without a helmet that covered his entire head as protection from sword blows. But as close combat ended and camouflage and mobility became more important, cloth headgear was introduced. These gave no protection against World War I's modern artillery weapons, though, and in 1915 France re-evaluated its uniform policy. While on a hospitals tour, Intendant-General August-Louis Adrian, in charge of military supplies for the French government, asked a soldier how he had survived head wounds, and was told he had worn his metal cooking bowl under his cap. Adrian began experimenting with headgear and borrowed from the casque du pompier worn by the Parisian Fire Brigade. The M15 Adrian helmet was introduced in July and was an instant success, but its 0.7mm thickness meant it

Flamethrower

The flamethrower looked a terrifying weapon, but in reality its bark was worse than its burn

04 The flamethrower was invented in 1900 by Richard Fiedler, in Berlin, although it would be 11 years before one was issued to the German army. The close-quarters fighting of trench warfare increased the need for short-range weapons, and the flamethrower was first used on 26 February 1915 by the German 3rd Guard Pioneer Regiment at Malancourt. Six were used at Ypres, where the trenches were fewer than five yards apart. However, most casualties came from troops running to escape the flames and being shot rather than being caught in the fire, and the ones in use in 1915 only had flammable liquid for two minutes of action. Despite being cumbersome, the Germans used flamethrowers in more than 300 battles during the war.

As aerial warfare took off, dogfights became more common over the Western front

Fleets of fighting aircraft

From airships (the most famous probably being the German Zeppelin) to fighter biplanes, World War I was the time when aircraft came into their own

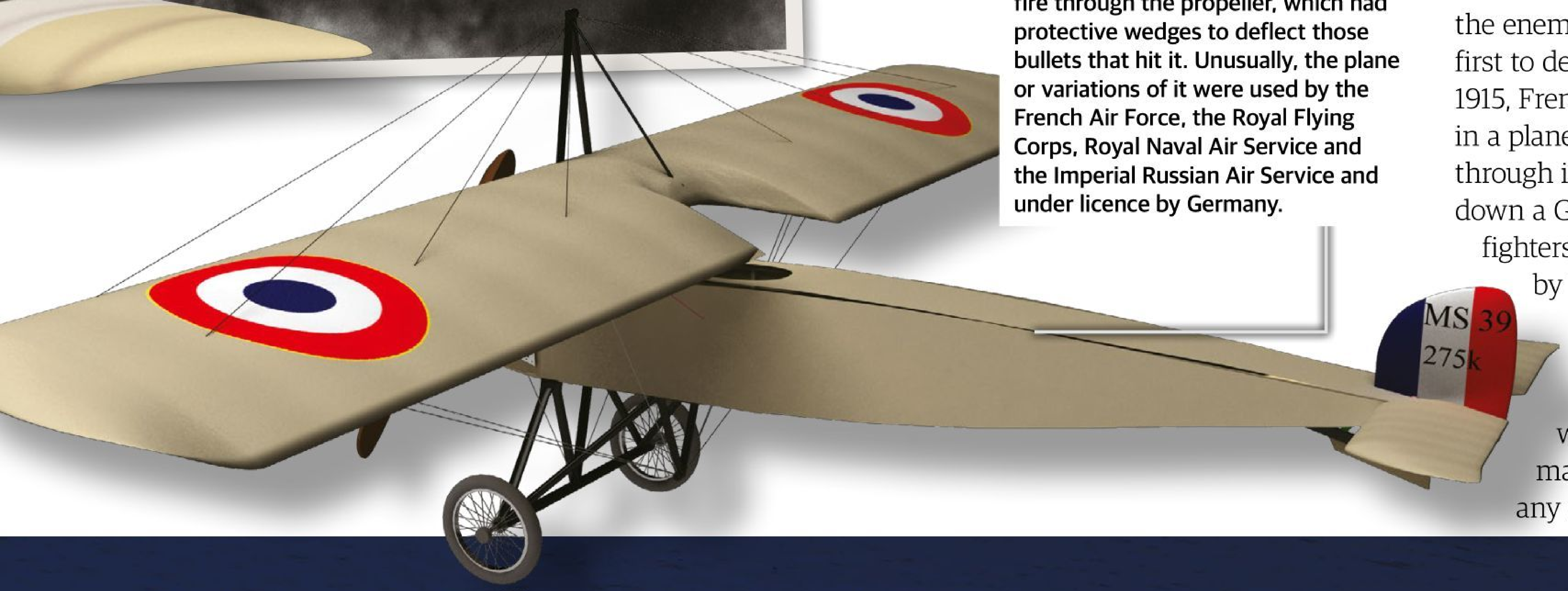
05

On 21 June 1917, Orville Wright wrote in a letter: "When my brother and I built and flew the first man-carrying flying machine, we thought we were introducing into the world an invention that would make further wars practically impossible... We thought governments would realise the impossibility of winning by surprise attacks." By this, Wright meant that planes would be used for reconnaissance, so any large troop movement would be immediately spotted. Indeed, reconnaissance was an important task throughout the war, but equally important was preventing the enemy from doing so. The French were the first to develop an effective solution. On 1 April 1915, French pilot Roland Garros took to the air in a plane armed with a machine gun that fired through its propeller, and on his first flight he shot down a German observation plane. Purpose-built fighters and bombers were soon being developed by both sides, with dogfights becoming a regular occurrence over European skies. In April 1917, the average lifespan of a British pilot was just 11 days. After the war, Wright wrote: "The aeroplane has made war so terrible that I do not believe any country will again care to start a war."

Morane-Saulnier L

Country of origin: France
Wingspan: 36ft 8in
Max speed: 78mph

The Morane-Saulnier L, armed with a Lewis Gun, was the first fighter to fire through the propeller, which had protective wedges to deflect those bullets that hit it. Unusually, the plane or variations of it were used by the French Air Force, the Royal Flying Corps, Royal Naval Air Service and the Imperial Russian Air Service and under licence by Germany.

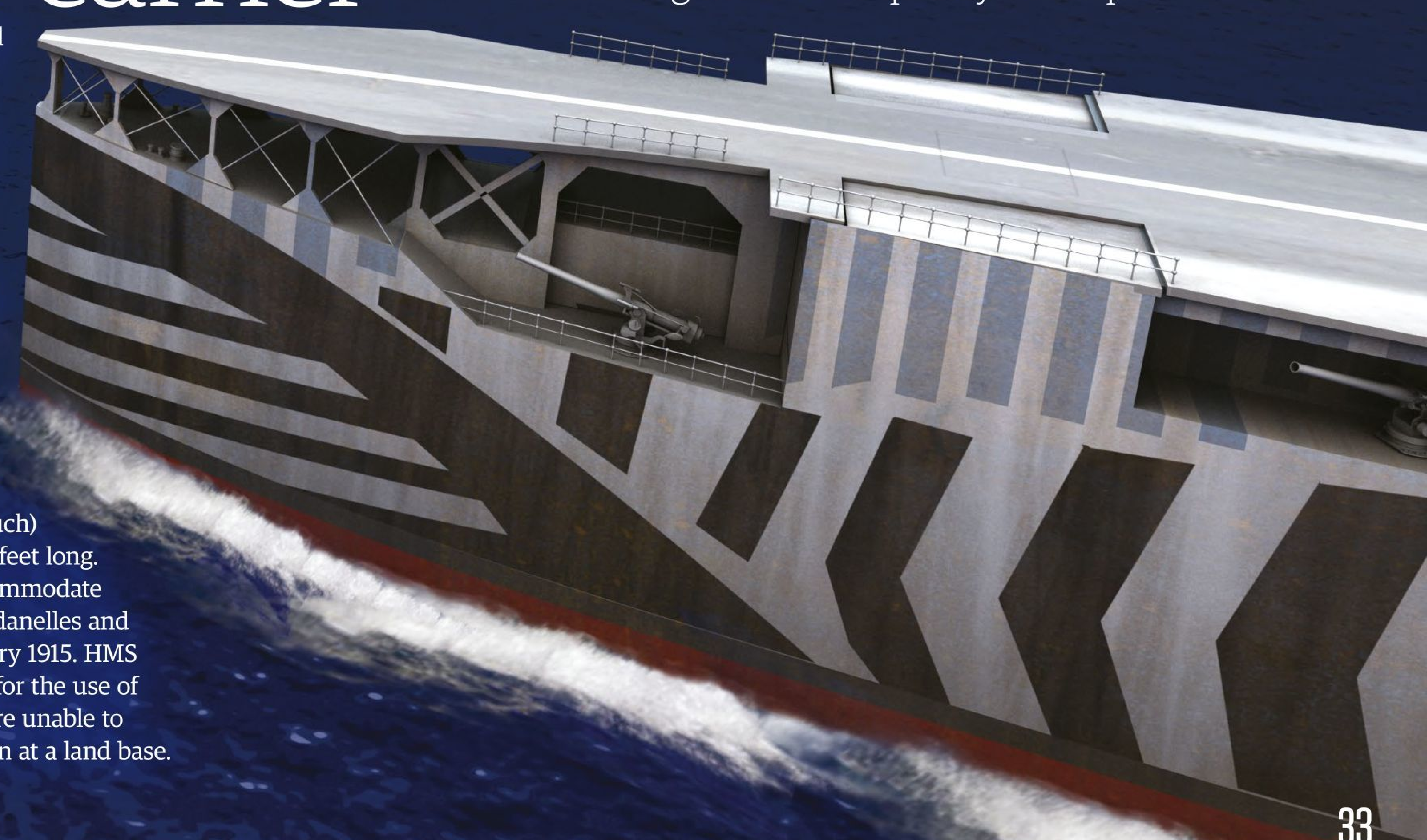


Aircraft carrier

As soon as planes were in the air, new ways of launching them were quickly developed

06

The first Royal Navy aircraft carrier, a ship adapted with a flight deck, was HMS Hermes in 1912. It carried two seaplanes that were launched on trolleys. Two years later, the first attacks were launched from the former Channel steamers Empress, Engadine and Riviera at anchor in Heligoland to bomb the Zeppelin sheds at the naval base of Cuxhaven. That year, the first warship built as an aircraft carrier (although not designed initially as such) was HMS Ark Royal, which was 366 feet long. The hangars below decks could accommodate ten seaplanes. It was sent to the Dardanelles and the first plane flew from it in February 1915. HMS Furious was the first aircraft carrier for the use of wheeled planes, however, planes were unable to return and had to finish their mission at a land base.



Tanks

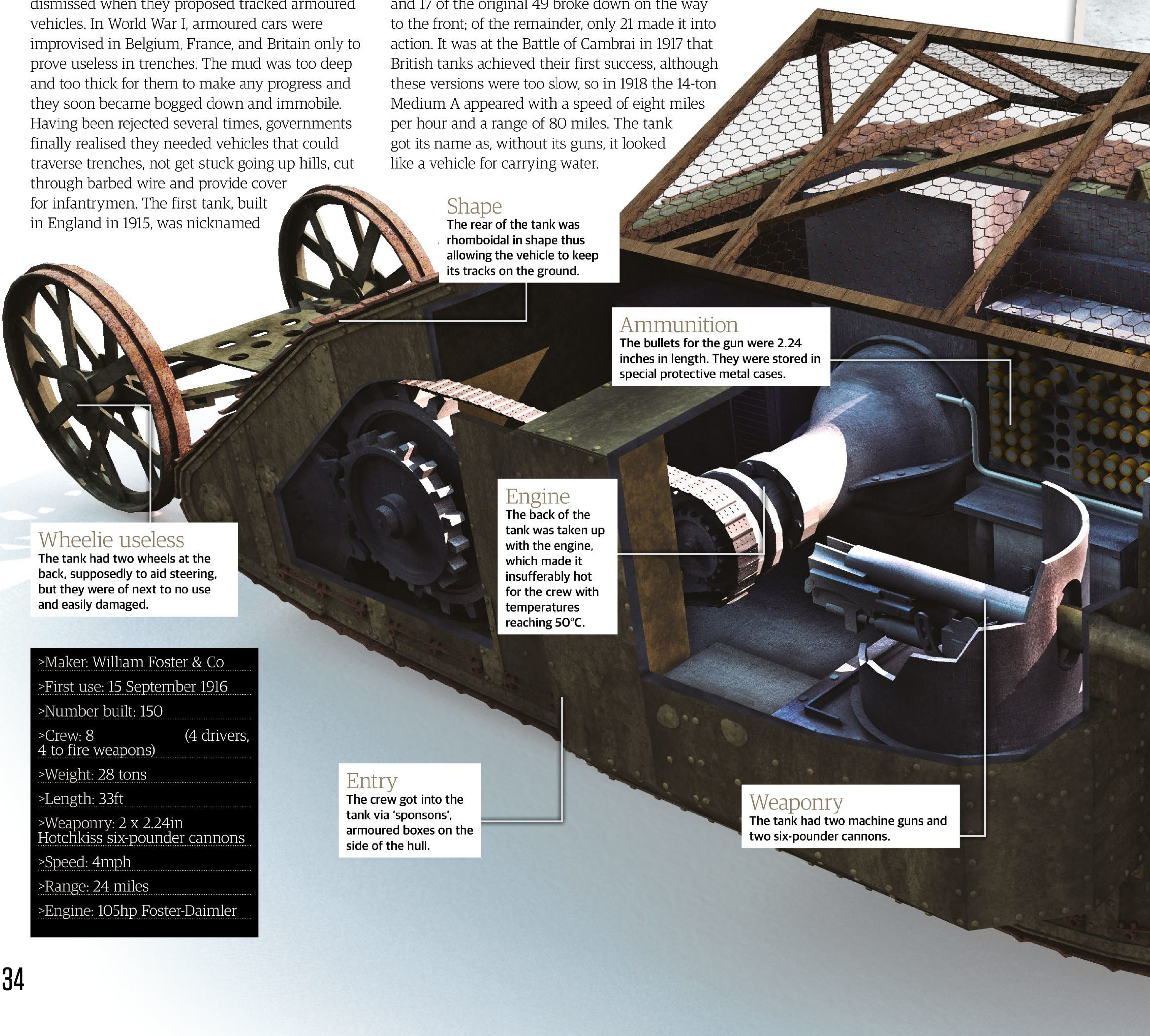
Until World War I, soldiers were used to being confronted by mounted troops on the battlefield. When the first tanks rumbled into action, one German cried: "The Devil is coming!"

07

The advent of the traction engine and automobile made tanks possible. Although the first self-propelled armoured vehicle was built in 1900 in England for the Boer War, engineers in France, Austria-Hungary, Germany and England were dismissed when they proposed tracked armoured vehicles. In World War I, armoured cars were improvised in Belgium, France, and Britain only to prove useless in trenches. The mud was too deep and too thick for them to make any progress and they soon became bogged down and immobile. Having been rejected several times, governments finally realised they needed vehicles that could traverse trenches, not get stuck going up hills, cut through barbed wire and provide cover for infantrymen. The first tank, built in England in 1915, was nicknamed 'Little Willie'. A second iteration, called 'Big Willie' then 'Mother', followed. They first appeared in battle at Flers-Courcelette in 1916 and terrified the Germans. One tank captured a village and another a trench of 300 Germans. What the enemy didn't know, however, was that the first tanks were hopelessly inefficient: the crews were untrained and 17 of the original 49 broke down on the way to the front; of the remainder, only 21 made it into action. It was at the Battle of Cambrai in 1917 that British tanks achieved their first success, although these versions were too slow, so in 1918 the 14-ton Medium A appeared with a speed of eight miles per hour and a range of 80 miles. The tank got its name as, without its guns, it looked like a vehicle for carrying water.

British Mark I

Pressure from Winston Churchill forced the War Office to produce an armoured bulletproof vehicle; production began in 1916. Not everyone was impressed. Field Marshal Douglas Haig said: "The idea that cavalry will be replaced by these iron coaches is absurd."



Shape

The rear of the tank was rhomboidal in shape thus allowing the vehicle to keep its tracks on the ground.

Ammunition

The bullets for the gun were 2.24 inches in length. They were stored in special protective metal cases.

Wheelie useless

The tank had two wheels at the back, supposedly to aid steering, but they were of next to no use and easily damaged.

Engine

The back of the tank was taken up with the engine, which made it insufferably hot for the crew with temperatures reaching 50°C.

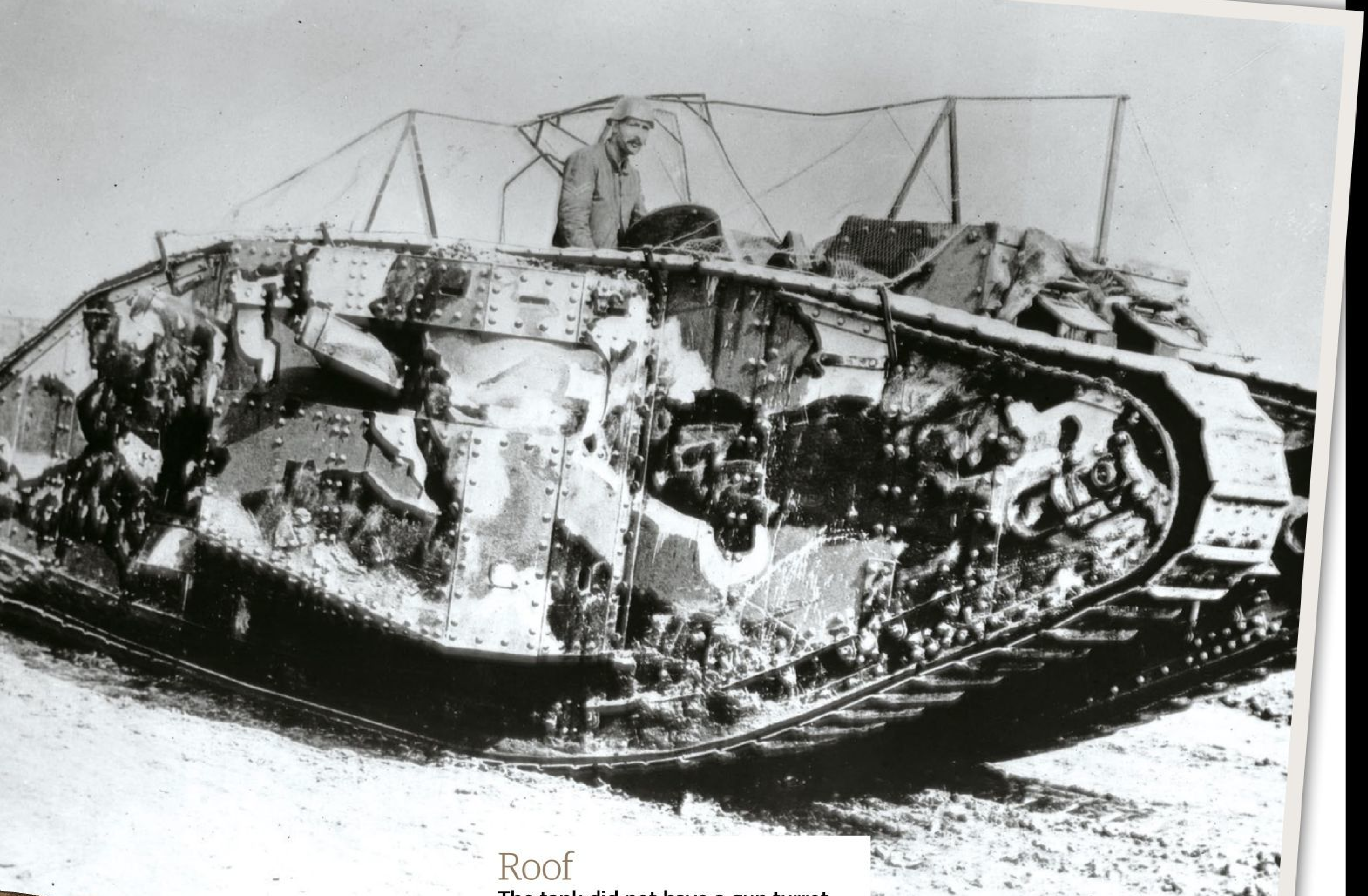
Entry

The crew got into the tank via 'sponsons', armoured boxes on the side of the hull.

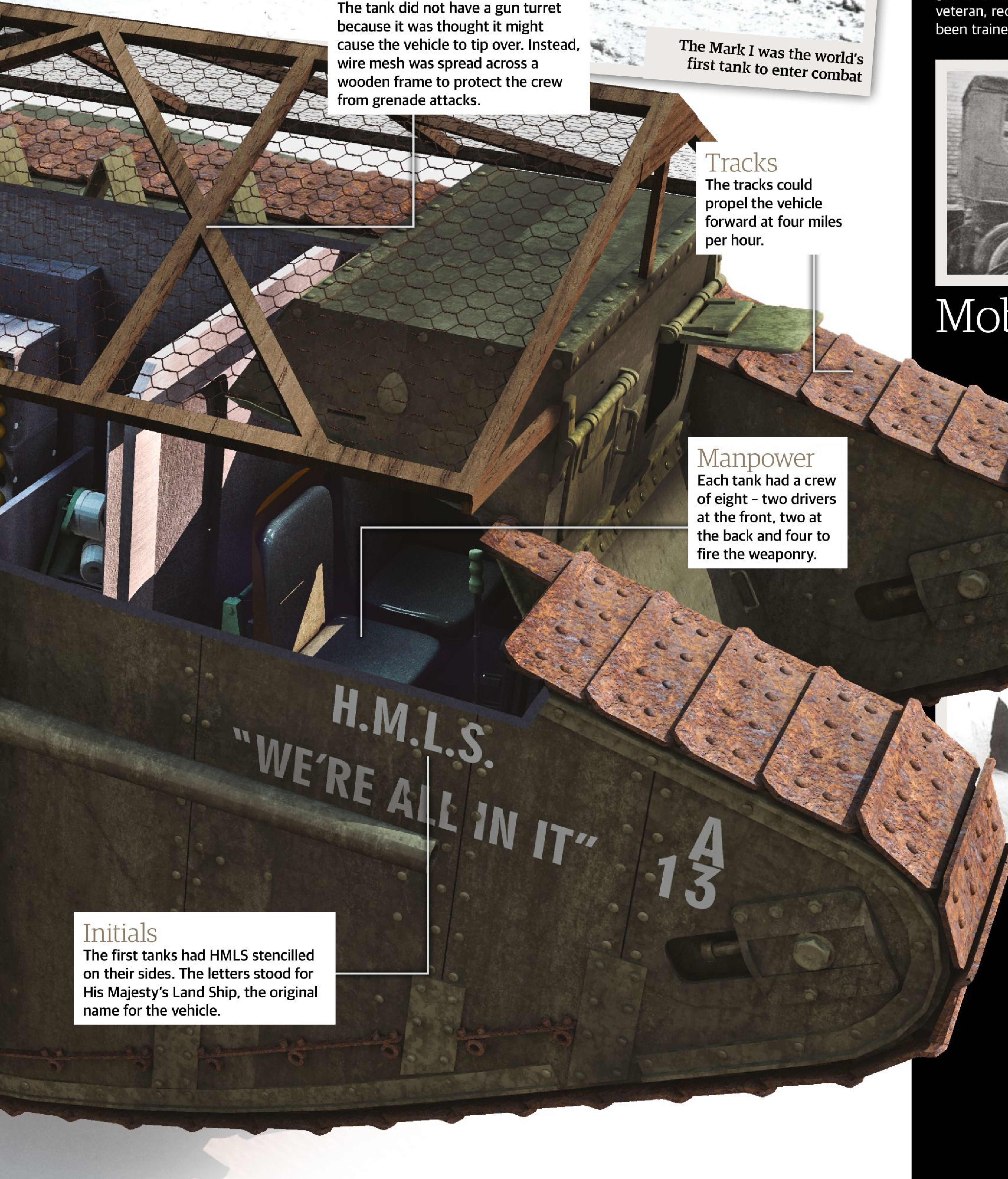
Weaponry

The tank had two machine guns and two six-pounder cannons.

>Maker: William Foster & Co
>First use: 15 September 1916
>Number built: 150
>Crew: 8 (4 drivers, 4 to fire weapons)
>Weight: 28 tons
>Length: 33ft
>Weaponry: 2 x 2.24in Hotchkiss six-pounder cannons
>Speed: 4mph
>Range: 24 miles
>Engine: 105hp Foster-Daimler



The Mark I was the world's first tank to enter combat

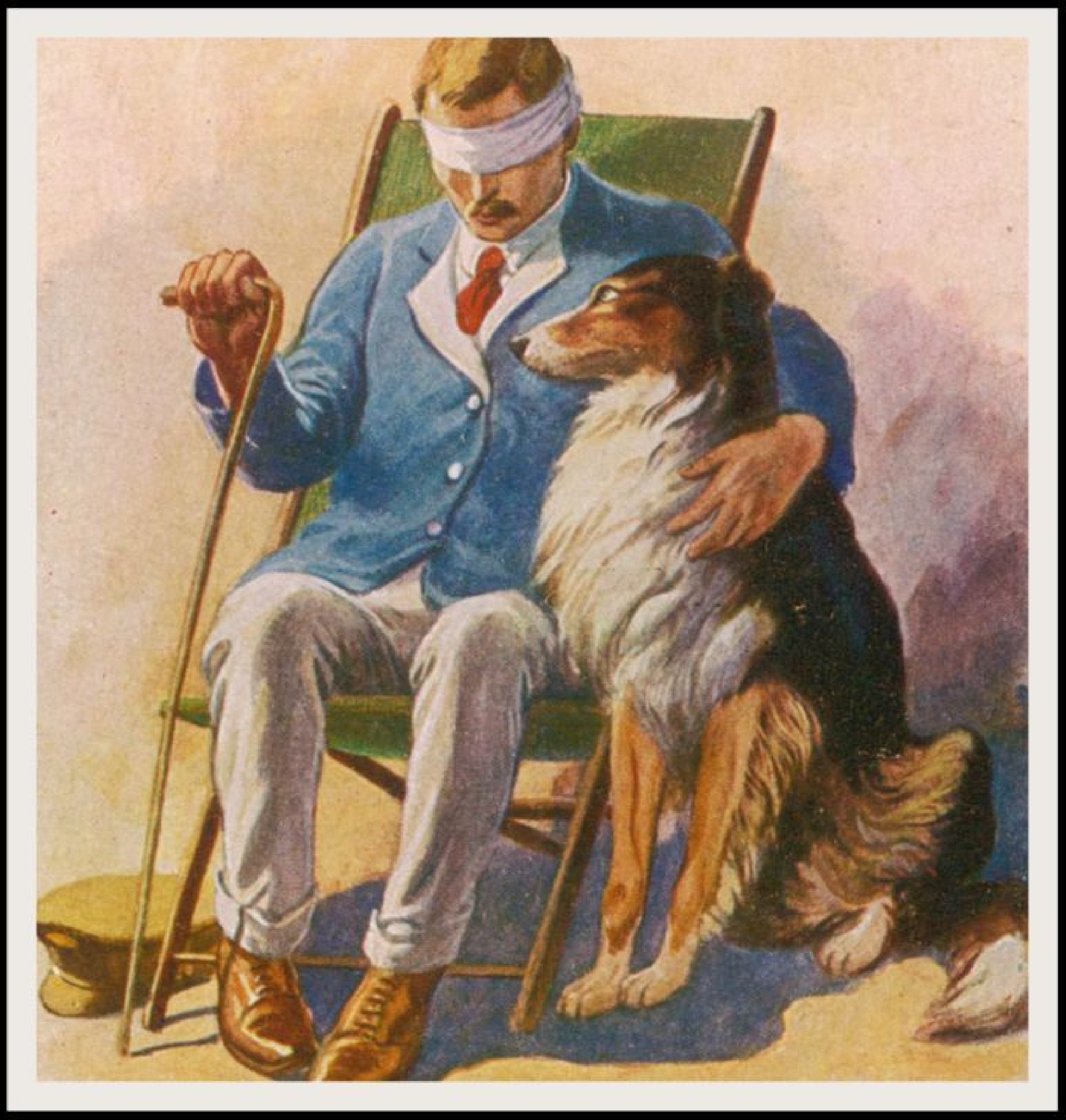


Roof
The tank did not have a gun turret because it was thought it might cause the vehicle to tip over. Instead, wire mesh was spread across a wooden frame to protect the crew from grenade attacks.

Tracks
The tracks could propel the vehicle forward at four miles per hour.

Manpower
Each tank had a crew of eight – two drivers at the front, two at the back and four to fire the weaponry.

Initials
The first tanks had HMLS stencilled on their sides. The letters stood for His Majesty's Land Ship, the original name for the vehicle.



Guide dogs

08 The Austrian War Dog Institute at Oldenburg opened the first guide dog training school in August 1916. Many men had been blinded by mustard gas or as the result of shell shock, and Paul Feyen, a blinded veteran, received the first dog. Within a year, 100 dogs had been trained and presented and 539 dogs were issued by 1919.

Mobile X-rays

09 In 1914, Marie Curie created 'les petites Curies', mobile radiography units allowing X-rays to be taken on or near the battlefield. She started France's first military radiology centre and arranged for 20 mobile X-ray vehicles as well as another 200 X-ray units to be installed at field hospitals. More than 1 million wounded soldiers were treated thanks to her X-ray units.

Blood banks

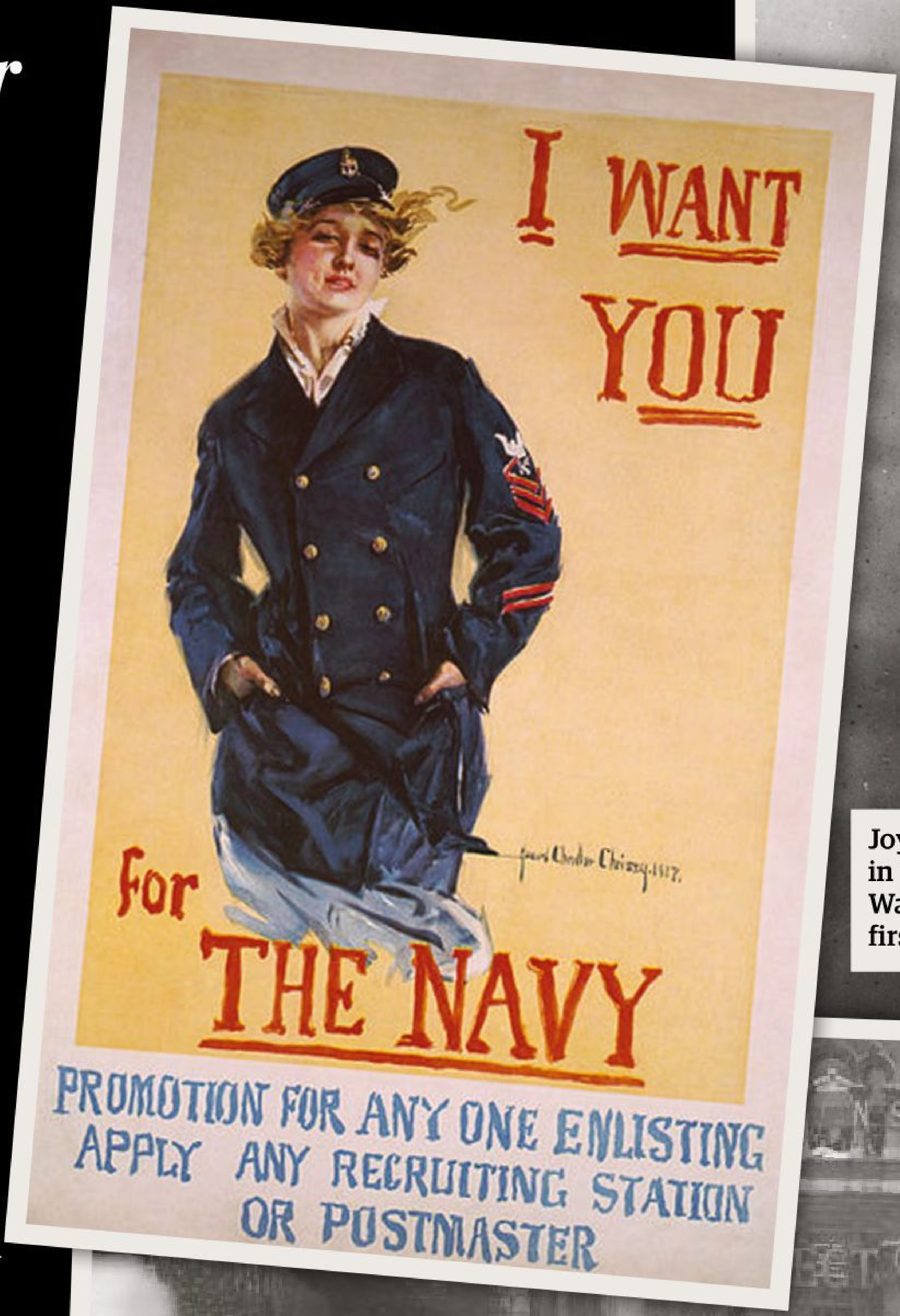
10 The problem facing war medics was preserving blood for more than a few hours. In 1917, Dr Oswald Robertson, an American serving with Canadian forces, conceived the idea of storing blood corpuscles in jars of glucose. They were brought in refrigerated ambulances to the front and kept cool until needed, whereupon a saline solution was added to make them usable.

Enlisted women

Women did much more than keep the home fires burning. Thousands volunteered to serve

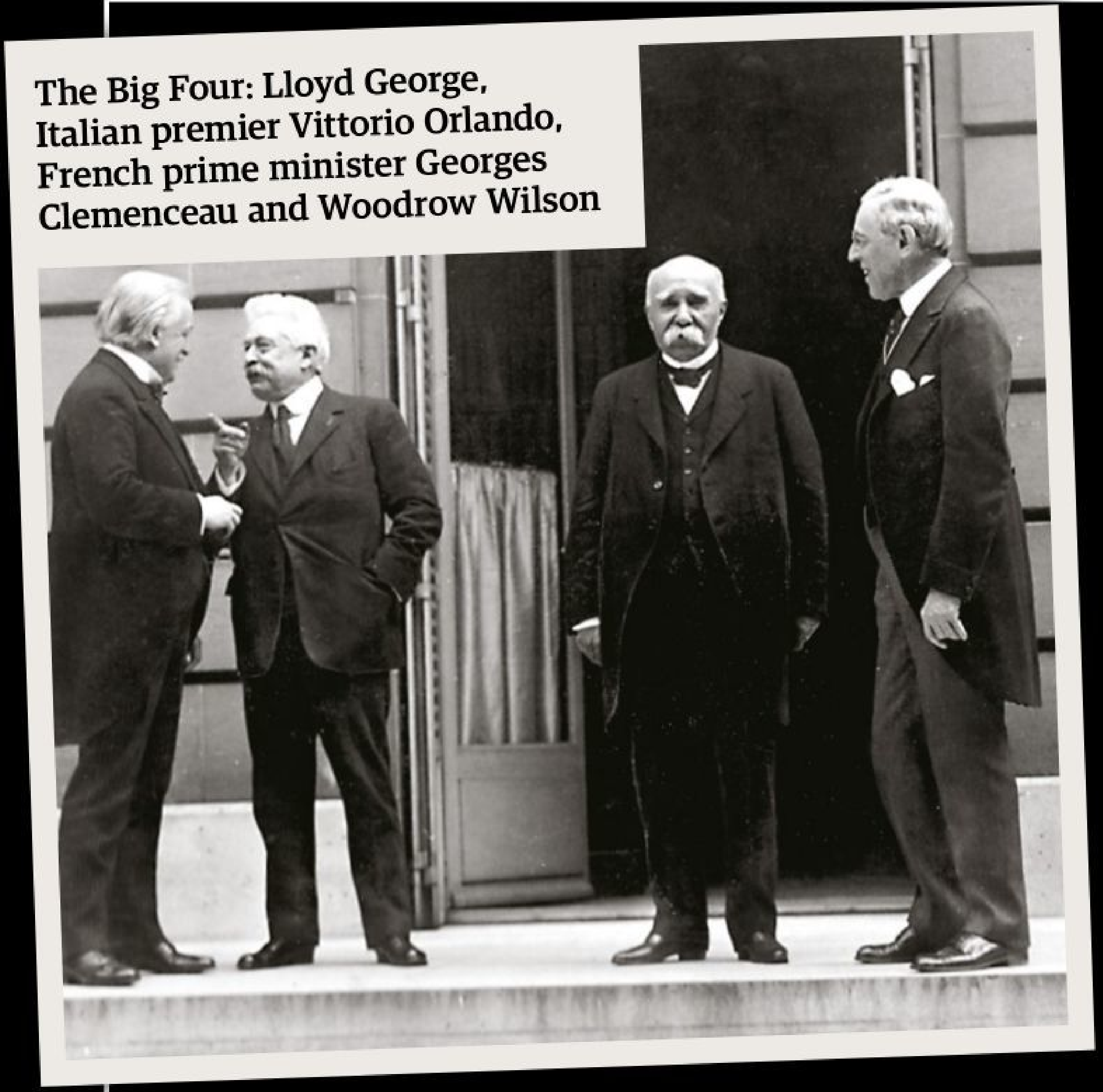
11 As the men went off to fight, the women were left behind. Suffragette Emmeline Pankhurst encouraged women to do more than "nurse soldiers or knit socks." This led to the first government-sponsored organisation, the Women's Forage Corps, followed by the Women's Forestry Corps and the Women's Land Army. And in 1917, the Women's Army Auxiliary Corps was founded. In March, the first 14 WAACS – cooks and waitresses – were sent to the front. Despite their military service, the women were expected to do clerical work, cooking, cleaning and other 'menial' tasks. The corps was disbanded in September 1921.

In the USA, they began introducing Yeoman (F) in the US Naval Reserve during World War I. They were usually called Yeowomen or Yeomanettes, and the first was Loretta Perfectus Walsh. Receiving the same pay as the men, $28.75 a month, the Yeomanettes, like their British equivalents, worked as typists, stenographers, accountants, bookkeepers and telephonists. It was, as in so many other aspects of this war, the technology that allowed the 11,274 recruited Yeomanettes to work. Many were stationed in the nation's capital, although Yeomen (F) served in England, France, Puerto Rico, the Virgin Islands, the Canal Zone, Guam and the Territory of Hawaii. The first black women to serve in the US Navy were 16 Yeomanettes from some of 'Washington's elite black families'.



Joy Bright Hancock served in World War I and World War II, becoming one of the first female officers in 1942

DRIVE
CAUTION
SLOWLY
The WAACs marching in London at the end of World War I in 1918


The Big Four: Lloyd George, Italian premier Vittorio Orlando, French prime minister Georges Clemenceau and Woodrow Wilson

Presidential trip to Europe

President Woodrow Wilson told Americans his '14 points' would secure post-war peace. He arrived in Europe to see them put in to action

12 With the war over, now came the battle for peace. President and Mrs Wilson arrived in Paris on a sunny 14 December 1918, the first trip to Europe by a serving president. Wilson was annoyed that the Peace Conference was delayed – the Germans and Austrians were in no hurry, the French blasé and Lloyd George awaited the result of the Coupon General Election. During their time in France, the Wilsons were treated to innumerable meetings, lunches and dinners and spent Christmas Day in the freezing cold at Chaumont with the American Expeditionary Force. The next day, the Wilsons set out for England, where they were met by King George and Queen Mary at Charing Cross Station before they were taken to Buckingham Palace. The president was also entertained at No 10, Guildhall and Mansion House before returning to France on 1 January 1919 and then moving on to Italy. Back in Paris, Wilson was impatient that the Peace Conference should start. It opened on 18 January. Five major peace treaties emerged including Versailles and the Covenant of the League of Nations.

One of the tests in Army Beta assessed the recruits' geometrical construction ability

IQ tests for soldiers

In a bid to avoid a random selection of soldiers as officers or cannon fodder, the USA introduced aptitude tests for their military personnel

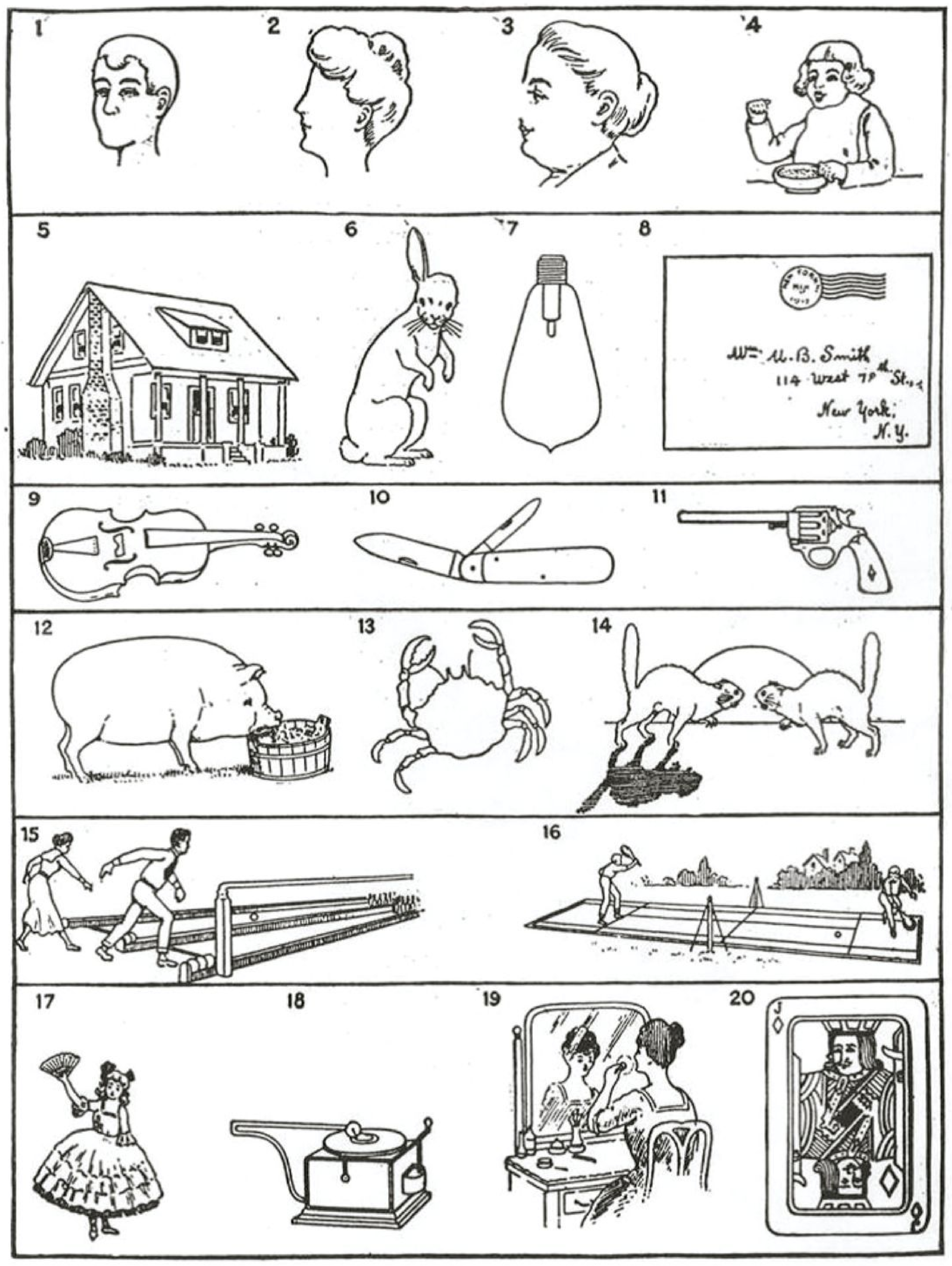
13 In 1916, Professor Lewis M Terman of Stanford University developed the first test to examine the aptitude of military personnel. More than 170,000 US soldiers took it during the war.

Originally, it comprised two examinations: those who were literate took the Alpha test while any illiterate and non-English-speaking soldiers took the Beta test. The Alpha test measured "verbal ability, numerical ability, ability to follow directions, and knowledge of information." Beta was a non-verbal test and examiners used charts and mime.

The results of both were graded A ('very superior' or potential officer class) to E ('very inferior' resulting in a low rank or even discharge). The Beta results were additionally checked against men in institutions to ensure the soldier being tested was of genuine low intelligence and not a malingerer. Both Alpha and Beta were discontinued after World War I and the results were published in *The Army Report* in 1921.

The Army Beta test

Illiterate, unschooled and non-English-speaking recruits were given this test to complete. Would you have passed? Can you tell what's missing from each image?



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Answers: 1) Mouth; 2) Eye; 3) Nose; 4) Hand; 5) Chimney; 6) Ear; 7) Filament; 8) Return address; 9) Strings; 10) Corkscrew 11) Trigger; 12) Tail; 13) Claw; 14) Shadow; 15) Ball; 16) Net; 17) Arm; 18) Speaker; 19) Arm in mirror; 20) Diamond

Charge of the Sturmtruppen

In 1914, the world was confronted with a new kind of warfare. The German response was to develop a new kind of soldier

New Year's Day, 1918, saw the appearance of a remarkable manual. 'The Attack in Position Warfare' was a distillation of the hard lessons learned during more than three years of intense combat on the Western Front. It detailed a new way of fighting, one that had formed as a natural response to the defensive dominance of the trenches.

It outlined a mode of warfare that stressed the co-ordination of various armaments and put an emphasis on individual initiative, right down to the low level of the common private soldier. Gone was the old-fashioned concept of a man drawing courage from large numbers of comrades around him. The new ideal was a man who drew on his own inner resolve to get the job done, who could react to changing circumstances and who relentlessly, remorselessly, pushed forwards.

'The Attack in Position Warfare' had a simple goal, to achieve a breakthrough in enemy defensive lines. Yet that simple goal had proved fiendishly difficult to achieve and had forced both sides of the conflict to consider and adopt new tactics. The Allies found their answer in massed tank formations. The Germans went in a different direction, developing infantry tactics that saw a new type of soldier achieve legendary status towards the end of the war. These new troops had steadily developed their tactics and now their hard-earned knowledge had been condensed into a single manual. Not for nothing has 'The Attack in Position Warfare' been described as 'the Stormtrooper Bible'.

The Kaiser's Offensive

Germany found itself in a desperate race against time as World War I moved towards its climax. The entry of the United States into the war had left the Germans with a small window of opportunity. They needed to secure a quick victory, or at least force the Allies into

"The Germans went in a different direction, developing infantry tactics that saw a new type of soldier achieve legendary status towards the end of the war"

Trenches had rendered old-style frontal assaults tragically expensive, forcing both the Allies and the Germans to consider new tactics

a compromised peace, before the industrial might of the US was brought to bear upon them.

The Kaiserschlacht (Kaiser's Battle, also known as the Spring Offensive), was actually a series of four campaigns launched from March 1918 through to July. Heading the assaults were the soldiers of the stormtroop units, the sturmtruppen or stosstruppen, who had evolved over the preceding years.

Germany's push for victory ended in failure. The stormtroopers, though they achieved stunning local successes, suffered heavy casualties as they pushed onwards through enemy positions and the Germans found it impossible to maintain their momentum, leaving them vulnerable to the inevitable allied counter-attacks. With the welcome addition of US troops, the Allies pushed the Germans back in the Hundred Days Offensive, recovering all of the ground that had been lost.

German capitulation was now inevitable, but the stormtroopers, with some justification, refused to accept that they had been defeated.

The new battlefield

Warfare had changed dramatically over the course of the 19th century and into the 20th, and much thought had been given to adapting to the new and terrifyingly lethal landscape. Gradually, it became clear that the old densely packed formations of men simply could not survive on the modern battlefield, hammered by artillery, raked by accurate rifle fire and, more recently, dominated by the machine gun.

By the start of World War I, the standard formation for assaults had become the extended skirmish line, intended to present as small a target as possible to defending troops. The intention, however, was still to approach an enemy line and deliver a climactic bayonet charge, but the grim realities of trench warfare soon convinced most that this was far too costly a method of operation.

As early as March 1915 an experimental unit had been set up to consider new weapons and tactics. This first sturmabteilung ('assault' or 'storm detachment'), led by Pioneer officer Major Caslow, was given a new gun, a mobile field artillery piece called a Sturmkannone, which could be dragged across the battlefield to support an attack. The detachment fared poorly in its first action. Split into small units and

> "The stormtroopers, though they achieved stunning local successes, suffered heavy casualties as they pushed onwards through their enemy's positions"

Armed to the teeth

As highly specialised troops, it is hardly surprising that the stormtrooper arsenal was very different to that of the regular German infantryman

The standard infantry weapon, the Gewehr 98, was a fine rifle, but not really suited to the sort of fighting undertaken by the stormtroopers. The shortened Karabiner 98a was not only handier for trench fighting, it also featured a different bolt design, which was less likely to catch on a uniform or other piece of equipment.

Even so, this carbine was carried into battle as a secondary weapon, slung across their back, as the stormtrooper's weapon of choice was the hand grenade. This posed a problem early in the war, when grenades were in short supply. The solution, the use of improvised explosives, was not ideal and it wasn't until 1916 that a sufficient supply of quality grenades was available to soldiers.

Several types were used, by far the most famous being the stielhandgranate, or 'stick grenade'. The hollow wooden handle allowed this grenade to be hurled long distances and it became one of the iconic weapons of the German Army, remaining in service through World War II.

The stick grenade's explosive charge was enveloped in a very thin metal casing, so fragmentation was minimal. It relied on blast to do its damage, while the smaller 'egg grenade', the second-most common design to be used, was a fragmentation type.

For especially difficult targets, a trooper might tape several stick grenades into a cluster before hurling them at an enemy position and grenade launchers offered a way of bringing their preferred weapon into action at longer ranges.

As tactics were gradually refined during the war, it was found that a balance of weaponry provided the best results. All of the men, including the commanding officer, carried grenades in a sandbag slung over the shoulder, but some would be armed with pistols (usually the P08 Luger and often fitted with a 32-round magazine), rather than a carbine. The lack of range and power of the 9mm weapon was not a factor once inside an enemy trench.

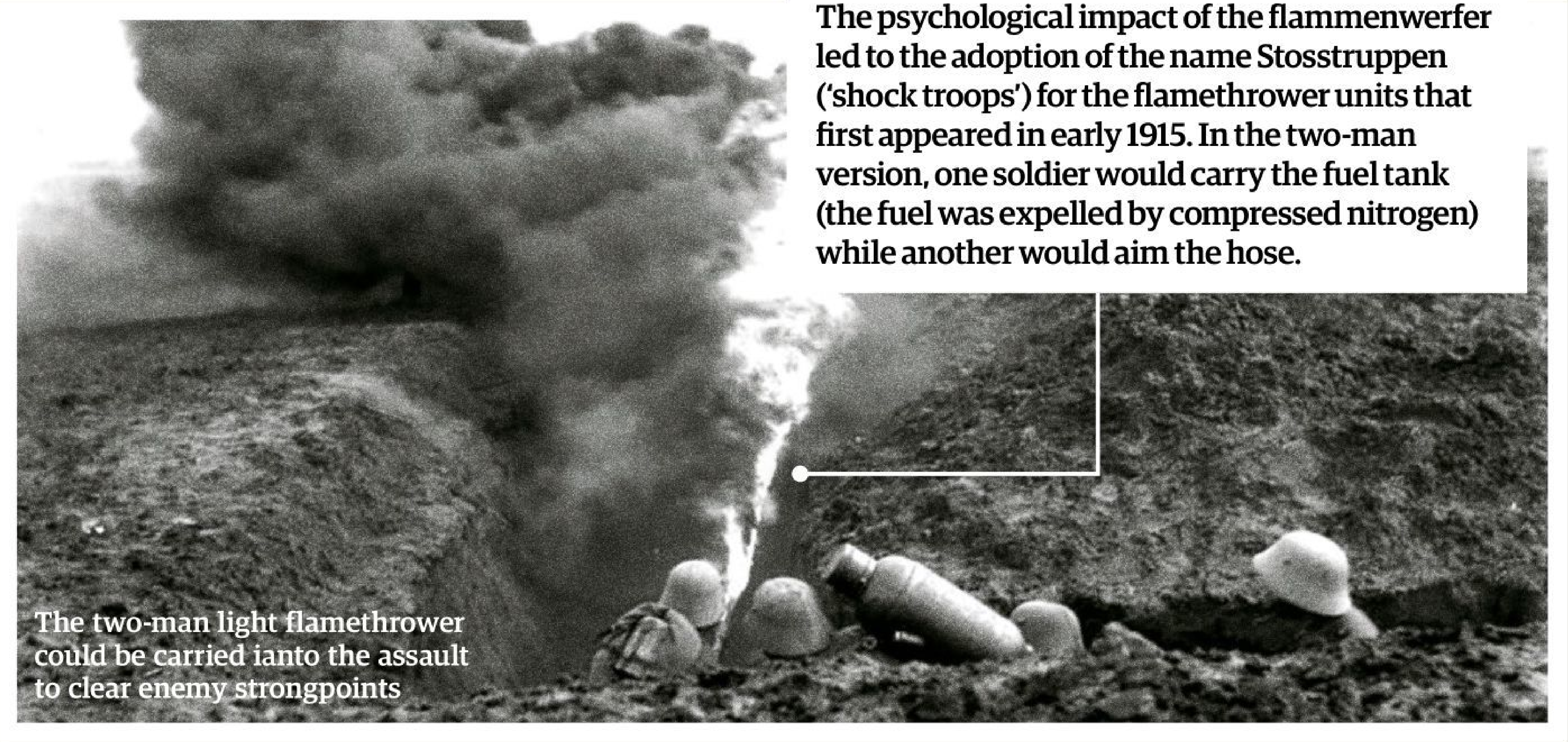
Supplementing these staple weapons were the specialist options. Flamethrowers were a part of each stormtrooper battalion, with two-man mobile versions able to accompany the men on their raids. Heavy machine guns would lay down suppressing fire before an assault, while light machine guns could provide the same service once the stormtroopers were closer to the targeted position.

Artillery support could be called upon from divisional batteries, but the provision of modified Russian field guns allowed a stormtrooper unit to also directly engage enemy strongpoints in the duration of an attack.

Mortar companies were attached to each Stormtroop battalion, using a mix of light and heavy designs, while gas was available from 1915 onwards. As well as the new helmet design, stormtroopers also found themselves tasked with trying out body armour, which was never likely to catch on given their need for ease and speed of movement. The steel armour was far too heavy to be dragged towards enemy lines, but it was sometimes used to kit out sentries.

The stormtroopers made use of a modified pack. The standard infantry pack, filled with spare uniform and rations, was far too bulky and instead an improvised 'assault pack' was used. This involved wrapping the trooper's greatcoat inside the M1892 tent and wrapping it around a canteen.

Entrenching tools and sharpened spades could double up as hand-to-hand weapons as well, while the gas mask was essential, to guard against enemy attacks and as protection when moving through gas laid down in preparation for an assault.

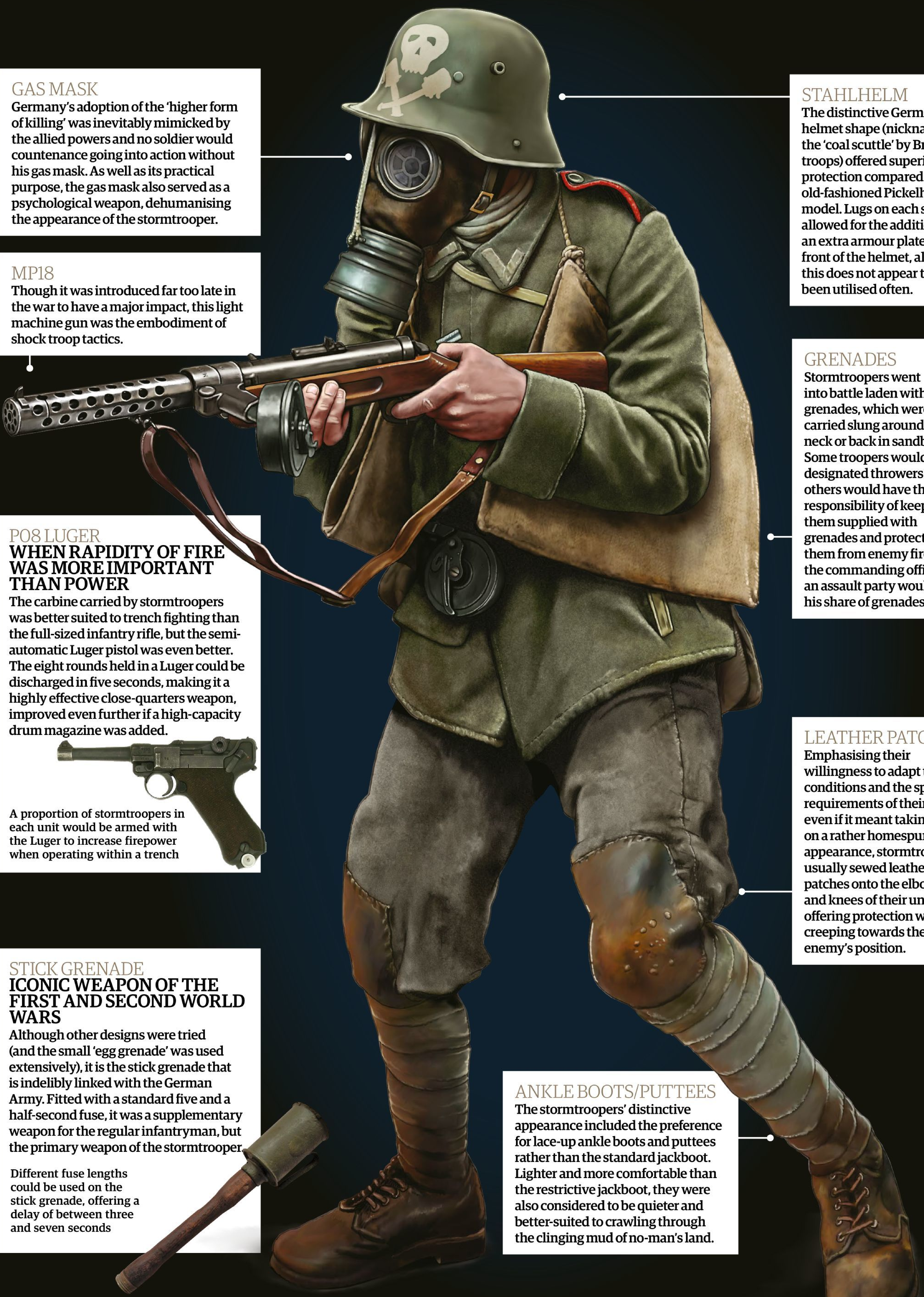


FLAMETHROWER

A TERRIFYING WEAPON THAT SHOT LIQUID FIRE INTO AN ENEMY POSITION

The psychological impact of the flammenwerfer led to the adoption of the name Stosstruppen ('shock troops') for the flamethrower units that first appeared in early 1915. In the two-man version, one soldier would carry the fuel tank (the fuel was expelled by compressed nitrogen) while another would aim the hose.

The two-man light flamethrower could be carried ianto the assault to clear enemy strongpoints



GAS MASK

Germany's adoption of the 'higher form of killing' was inevitably mimicked by the allied powers and no soldier would countenance going into action without his gas mask. As well as its practical purpose, the gas mask also served as a psychological weapon, dehumanising the appearance of the stormtrooper.

MP18

Though it was introduced far too late in the war to have a major impact, this light machine gun was the embodiment of shock troop tactics.

P08 LUGER

WHEN RAPIDITY OF FIRE WAS MORE IMPORTANT THAN POWER

The carbine carried by stormtroopers was better suited to trench fighting than the full-sized infantry rifle, but the semi-automatic Luger pistol was even better. The eight rounds held in a Luger could be discharged in five seconds, making it a highly effective close-quarters weapon, improved even further if a high-capacity drum magazine was added.

A proportion of stormtroopers in each unit would be armed with the Luger to increase firepower when operating within a trench

STICK GRENADE

ICONIC WEAPON OF THE FIRST AND SECOND WORLD WARS

Although other designs were tried (and the small 'egg grenade' was used extensively), it is the stick grenade that is indelibly linked with the German Army. Fitted with a standard five and a half-second fuse, it was a supplementary weapon for the regular infantryman, but the primary weapon of the stormtrooper.

Different fuse lengths could be used on the stick grenade, offering a delay of between three and seven seconds

STAHLHELM

The distinctive German helmet shape (nicknamed the 'coal scuttle' by British troops) offered superior protection compared to the old-fashioned Pickelhaube model. Lugs on each side allowed for the addition of an extra armour plate on the front of the helmet, although this does not appear to have been utilised often.

GRENADES

Stormtroopers went into battle laden with grenades, which were carried slung around the neck or back in sandbags. Some troopers would be designated throwers, while others would have the responsibility of keeping them supplied with grenades and protecting them from enemy fire. Even the commanding officer of an assault party would carry his share of grenades.

LEATHER PATCHES

Emphasising their willingness to adapt to conditions and the specific requirements of their duties, even if it meant taking on a rather homespun appearance, stormtroopers usually sewed leather patches onto the elbows and knees of their uniforms, offering protection when creeping towards the enemy's position.

ANKLE BOOTS/PUTTEES

The stormtroopers' distinctive appearance included the preference for lace-up ankle boots and puttees rather than the standard jackboot. Lighter and more comfortable than the restrictive jackboot, they were also considered to be quieter and better-suited to crawling through the clinging mud of no-man's land.

Illustration: Jean-Michel Girard / The Art Agency

spread among various regiments, Sturmabteilung Caslow took heavy casualties and the Sturmkannone proved ineffective. Nevertheless, the first steps had been taken and under a new leader, Captain Willy Ernst Rohr, the stormtrooper began to emerge in a recognisable form.

The adoption of a new gun, a modified version of captured Russian guns, improved the efficiency of the unit, which performed with distinction at Verdun, although it again suffered heavy casualties.

The German top brass was impressed enough to expand the detachment to battalion strength and the new Sturmbataillon Rohr took on a role as an instructional unit. From May 1916, officers and NCOs from all the active German armies were sent to learn new tactics, before returning to their own formations to spread the word. This underlines one of the common misconceptions of the stormtroopers. They were never meant to be an elite force – the new tactics were intended to be spread throughout the entire German army.

Independent development

In keeping with the German Army's tolerance for initiative and innovation, stormtrooper tactics had also begun to appear spontaneously throughout frontline units.

Various names were given to these units – including jagdkommando ('hunting commando') and patrouillentrupp ('raid troop'), but it was stosstruppen ('shock troops') that initially caught on during this time. The various units experimented with new weapons and tactics, notably the use of hand grenades and flamethrowers.

General Paul von Hindenburg, Kaiser Wilhelm II and General Erich Ludendorff formulated several strategies to achieve German victory

> "Pioneer troops were originally called upon to fulfil the role of grenadiers, operating in small groups, or even as individual soldiers attached to a unit"

German trench raiders attacking an enemy position

The first blitzkrieg?

The tactics developed by stormtroop units in World War I created a template that was followed in future wars

Stormtrooper tactics focused on penetrating a section of the enemy's trench, before moving on to clear as much of the trench as possible to either side. There were various methods of attaining this goal. An initial artillery barrage could isolate the target area. For this, the guns of an entire division could be used to pound the areas behind and to each side of the target, before a brief bombardment of the target itself. Gas might also have been used to isolate an area, or heavy machine guns could lay down suppressing fire to cover an advance.

After this preparatory action, the stormtrooper party would advance. Flamethrowers could eliminate machine-gun nests before the enemy trench was reached. The trench would then be attacked with grenades before the troopers rushed in to tackle what remained of the defenders. Speed and aggression were the watchwords, as a 1916 German troop pamphlet on Stosskraft ('shock tactics') emphasised.

"If it happens in an attack that the attackers are fired upon from a hostile trench beyond grenade range," the pamphlet instructed, "they must all close on the trench at full speed, throwing their grenades, lie down whilst the grenades burst, and then rush into the trench without hesitation."

Once an area had been overrun, the stormtroopers would advance along the trench. Two 'leaders', armed with pistols, would take the point, with the commanding officer behind. Further troops, armed with grenades, pistols or carbines, would follow. Grenades could be hurled into sections of the trench ahead to 'soften up' the position before it was cleared by the stormtroopers themselves.

If a section of the trench proved too difficult to overcome, a barricade could be swiftly assembled, using empty sandbags brought along or any other material to hand. Areas of a trench that had been cleared would be marked with white flags to prevent further stormtroop units from attacking.

Where large flamethrowers were used as opposed to the smaller, two-man versions, a deluge lasting for about a minute would prepare the position for assault. The stormtroopers would then aim to attack no more than a minute later to capitalise on the confusion and panic caused by the initial flamethrower attack.

With the publication of 'The Attack in Position Warfare' in 1918, stormtrooper tactics were crystallised, but a modification occurred for the great German offensive of that year. Whereas they had previously been given a specific target, stormtroopers were now asked to avoid pockets of resistance and press on into the rear.

Although the term was not used at the time, this was a classic implementation of 'infiltration tactics'. It allowed the stormtroopers to keep up a rapid pace, spreading disorder and chaos throughout an enemy position, but it also, inevitably, led to high casualties as the stormtroopers outstripped their own cover.

'Blitzkrieg', as employed by Germany in World War II, relied on fast-moving troops to penetrate an enemy defensive line and press on into the rear. Influential World War II general Generalfeldmarschall Erwin Rommel gained a lot of military experience as a stormtroop commander.

Many of the principles employed in the 1939 invasion of Poland stemmed from World War I stormtrooper tactics

Pioneer troops were originally called upon to fulfil the role of grenadiers, operating in small groups, or even as individual soldiers attached to a unit. However, as the possibilities of the weapon became more apparent, grenade training became universal. Because of the natural alarm caused by holding a small bomb in the hand, trainees initially used dummy grenades, and then grenades with a fuse but no charge.

An especially prepared training ground would include all the features a soldier would be likely to see when out on a real battlefield – wire, trenches, strongpoints and even some civilian buildings. The grenade would become the primary weapon of the stormtrooper (although flamethrowers, light machine guns and mortars would also have their own part to play) and the troopers were actually referred to as grenadiere.

According to legend, it was the adoption of flamethrowers that gave rise to the stosstruppen name. The terror inspired in enemy forces by a sudden deluge of liquid fire was immediate (and understandable) and flammenwerfer quickly found a place in stormtrooper units.

Two main types existed: larger flamethrowers that were mainly static, and smaller, mobile units that could be operated by two-man teams; they were capable of causing a lot of damage quickly.

Battalion organisation

By the end of 1916 there were 16 stormtroop battalions, made up mostly of volunteers. Many of the small detachments that had sprung up among the German armies formed the basis for these new, official units.

A battalion would be comprised of up to 1,400 men, usually divided into five companies. One or two companies would be armed with six (and later 12) heavy machine guns. One company would operate mortars (usually eight to a company) and there would also be a troop of six two-man flamethrowers. A battery of direct support infantry artillery (armed with four of the modified Russian field guns) was also part of the battalion.

The intention was to utilise the merits of each type of weapon with the others, resulting in a force that had the ability to take on any objective. One type of armament that was not as prevalent as it might have been, however, was the light machine gun.

> "Perfect for trench combat, the MP18 could fire at a rate of 400-500 rounds per minute, but it arrived too late to make much of an impact"

German troops make a move while carrying their Lewis guns during the Battle of the Somme

Stormtroopers lining the trenches in Belgium

Right: A trooper carrying the Bergmann MP18

Below: German stormtroopers running across Champagne

The heavy machine guns employed by both sides were devastating weapons, able to lay down sheets of fire at extreme range. They were not, however, in any way mobile and the Germans lagged far behind in the development of a light machine gun to accompany assault troops across 'no man's land'.

Such guns could lay down suppressing fire to allow fellow troops to advance, and could also hold off enemy counter-attacks. Although the Germans did develop the MG 08/15, a lighter version of the full-sized MG 08, this was still a cumbersome weapon and stormtroop units made more use of Madsen guns (Danish-made and captured from the Russians) and, with more success, the Lewis gun (American-designed and captured from the British).

The stormtrooper would go into battle with a variety of equipment – spades, picks, wire-cutters, hatchets, entrenching tools and water bottles. Many of these could be used as ad hoc weapons in the vicious close-quarters combat that sometime erupted when entering an enemy trench. Stormtroopers also carried trench knives for this purpose and used a carbine, the Karabiner 98a, which was 16 centimetres shorter than the standard rifle used by the rest of the infantry and was easier to handle in the trenches.

One weapon that the stormtrooper did not have the luxury of using until the very end of the war, and then in only small numbers, was the sub-machine gun. Perfect for trench combat, the MP18 could fire at a rate of 400-500 rounds per minute, but it arrived too late to make much of an impact.

The 'princes of the trenches'

The new assault battalions would operate in a completely different manner to that of the standard infantry, hunkered down in its trenches. The tactics employed by stormtroop units were demanding and required fitness, intelligence, stamina and initiative. Inevitably this meant that most of the troopers were young men, but there was a place for maturity as well. Records indicate that up to 15 per cent of a battalion would be over the age of 30. Training was demanding and occasionally deadly, as live ammunition would often be used.

Stormtroop tactics valued speed and aggression, and they quickly began to not only act differently, but to take on a distinctive look as well. They quickly discarded their jackboots in favour of ankle boots and puttees, and leather patches on the elbows and knees of their uniforms offered protection when they were crawling towards an enemy through the trenches or on fighting ground.

Most importantly, however, they were among the first troops to receive a new style of helmet, the Stahlhelm, which became the standard design for the German army in later years but was highly distinctive when first introduced.

The result was that stormtroopers were inevitably viewed as a breed apart and this impression was emphasised by their preferential treatment. Not only were they given extra rations (a simple necessity given the arduous nature of their work) but they were also driven to the front lines for their sorties and then returned to bases in the rear afterwards. Their work was undoubtedly demanding and usually brutal, but they endured it in short bursts, whereas their trench-bound comrades had to suffer for much longer periods.

The stormtrooper therefore generated mixed emotions in his fellow soldiers. There was an undeniable element of hero-worship. The confidence, swagger and 'otherness' of the troopers inevitably inspired awe among the other soldiers, but their operations often upset the delicate balance of trench life. A stormtrooper raid might capture prisoners

> "Stormtroopers were inevitably viewed as a breed apart and this impression was emphasised by their preferential treatment"

Betrayal on the Home Front

Many German soldiers were unwilling to accept that their war had ended and quickly found an outlet for their anger

Significant numbers of German soldiers came to believe that the capitulation of Germany was nothing less than a betrayal by civilian bodies back home. Experiencing the alienation and isolation common to fighting men through the ages, many felt that they no longer had a place in civilian society and welcomed the opportunity to enlist in independent paramilitary units. The Freikorps had a long and colourful history dating back to the 18th century, but, in post-World War I Germany, they were characterised by extreme nationalistic views and antipathy towards both socialist and communist organisations.

Some units were consciously modelled on stormtroop battalions, such as that led by General Georg von Maercker, formed in December 1918. His Freikorps included machine gun squads, flamethrowers, mortars, light artillery and armoured cars. Motives for joining such units included a lack of viable options, a desire for stability in the chaos of post-war Germany and, often, a thirst for further combat. Some Freikorps units were essentially the remnants of entire battalions, reformed under a new name. Less than a year after the end of the war, an estimated 200-400,000 men were enlisted in Freikorps units of varying size, and their attitudes were captured in the chilling words of Freikorps soldier FW Heinz: "People told us that the War was over. That made us laugh. We ourselves are the War."

A Freikorps unit, bearing more than a passing resemblance to World War I stormtroopers, photographed in Berlin

Images: Getty

Though stormtrooper tactics were intended to be spread throughout the army, in reality only a minority of German soldiers made up these unique groups

or inflict casualties, but by the time the inevitable response came from the enemy, the stormtroopers themselves were well out of harm's way, leaving the regular infantry to suffer.

"The men of the storm battalions," wrote German Medical Officer Stefan Westmann, "were treated like football stars. They lived in comfortable quarters, they travelled to the 'playing ground' in buses, they did their jobs and disappeared again, and left the poor foot-sloggers to dig in, to deal with the counter-attacks and endure the artillery fire of the enemy."

Yet there was also admiration for the professionalism displayed by the stormtroopers, who, again in Westmann's words, "moved like snakes over the ground, camouflaged and making use of every bit of cover, so that they did not offer any targets for artillery fire."

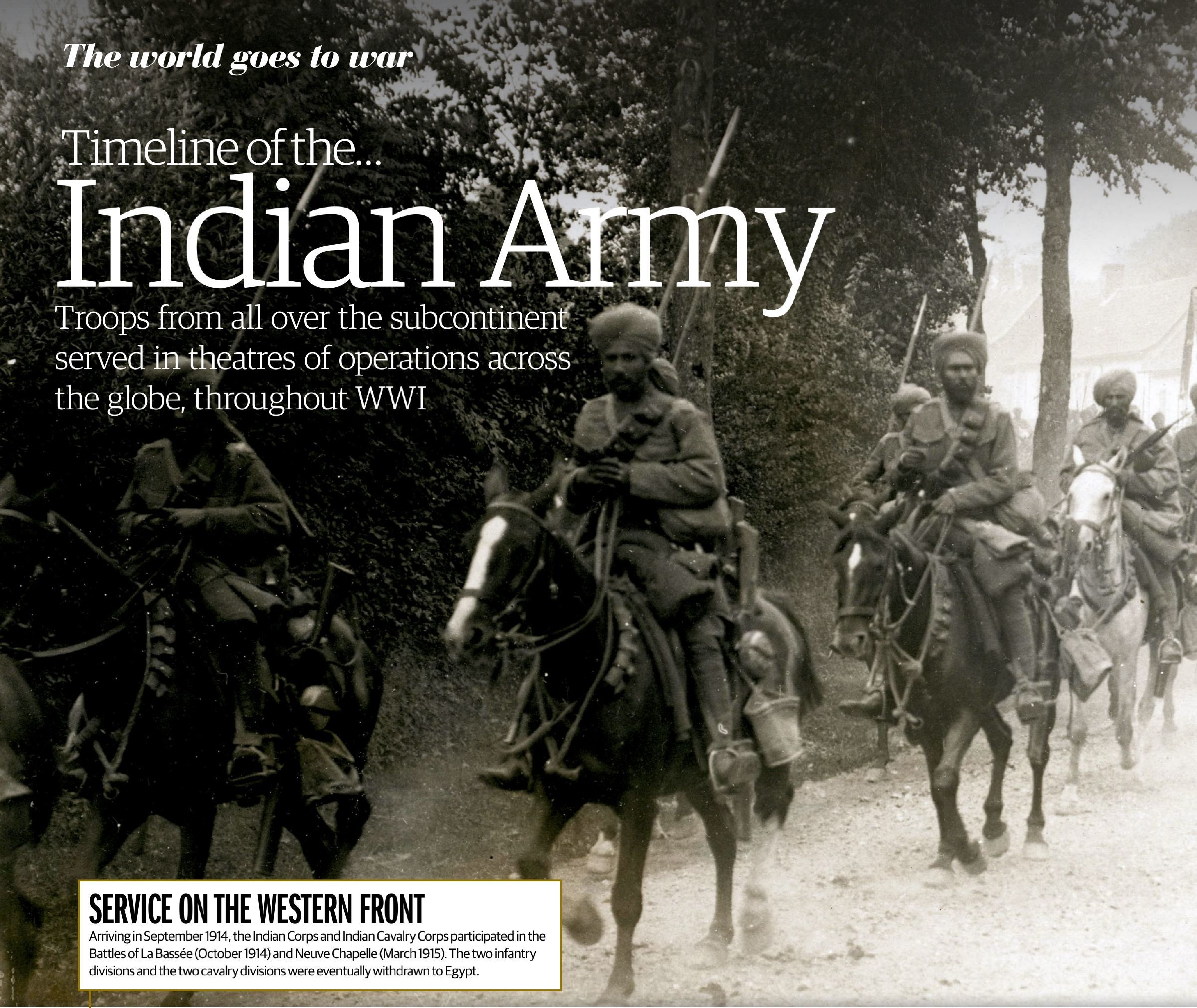
The birth of 'blitzkrieg'

Plans to train the entire army in the new storm tactics proved impossible to implement and in preparation for the major offensive in the spring of 1918, General Erich Ludendorff was forced to divide the German Army. The fittest troops were designated 'attack divisions', while the older and less able (as well as the newest recruits, who had not had time to be properly trained) were allocated trench-garrison duties.

Most men in the attack divisions would have received at least some training in the new tactics, but it was the stormtrooper battalions that would be the cutting edge of the offensive division. Ordered to ignore strongpoints that could not be quickly overwhelmed and continue pushing into the enemy's rear, the stormtroopers inevitably outran their support and suffered from their isolation when the Allies were able to mount counter-attacks.

The stormtroopers had proved to be too few in number to decisively tilt the course of the war. Although they had proved to be highly effective tactically, they were unable to offer a strategic solution. That was to come later, as the lessons of the war were digested and plans were made for the next one. The squad-based tactics of the stormtrooper would become the standard for armies across the world and were central to the infantry's role in the blitzkrieg unleashed by Germany in World War II.

By then, the stormtrooper had become a legendary figure whose very name inspired awe and even fear in the ranks of his enemies.



Timeline of the... Indian Army

Troops from all over the subcontinent served in theatres of operations across the globe, throughout WWI

SERVICE ON THE WESTERN FRONT

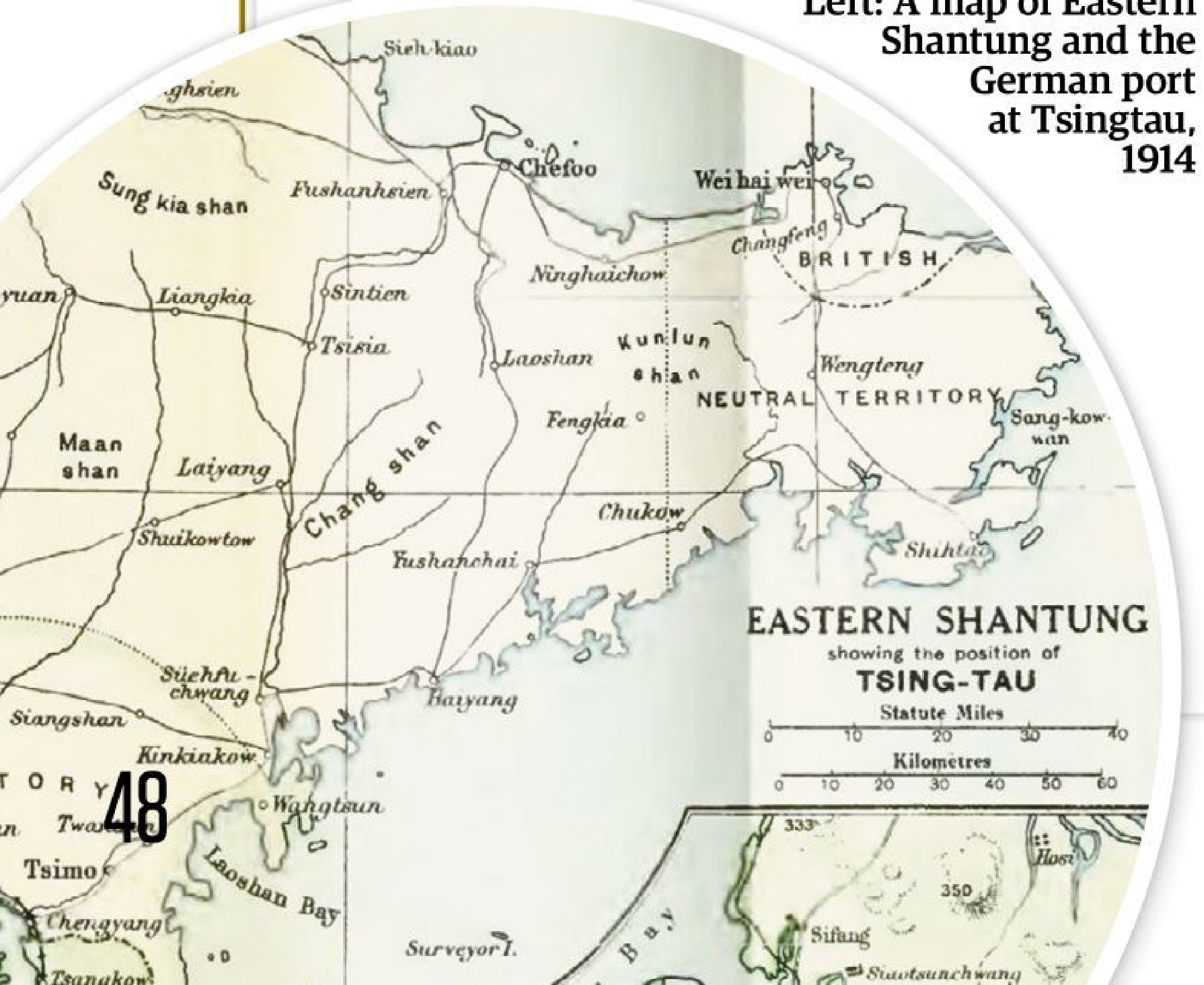
Arriving in September 1914, the Indian Corps and Indian Cavalry Corps participated in the Battles of La Bassée (October 1914) and Neuve Chapelle (March 1915). The two infantry divisions and the two cavalry divisions were eventually withdrawn to Egypt.

SEPTEMBER 1914-MARCH 1918

NOVEMBER 1914

Siege of Tsingtao, China

The 36th Sikhs participated in the Siege of Tsingtao, a German port in China, as part of a small British contingent from the garrison of Tianjin. This was attached to a larger Japanese force that besieged, and eventually captured, Tsingtao.



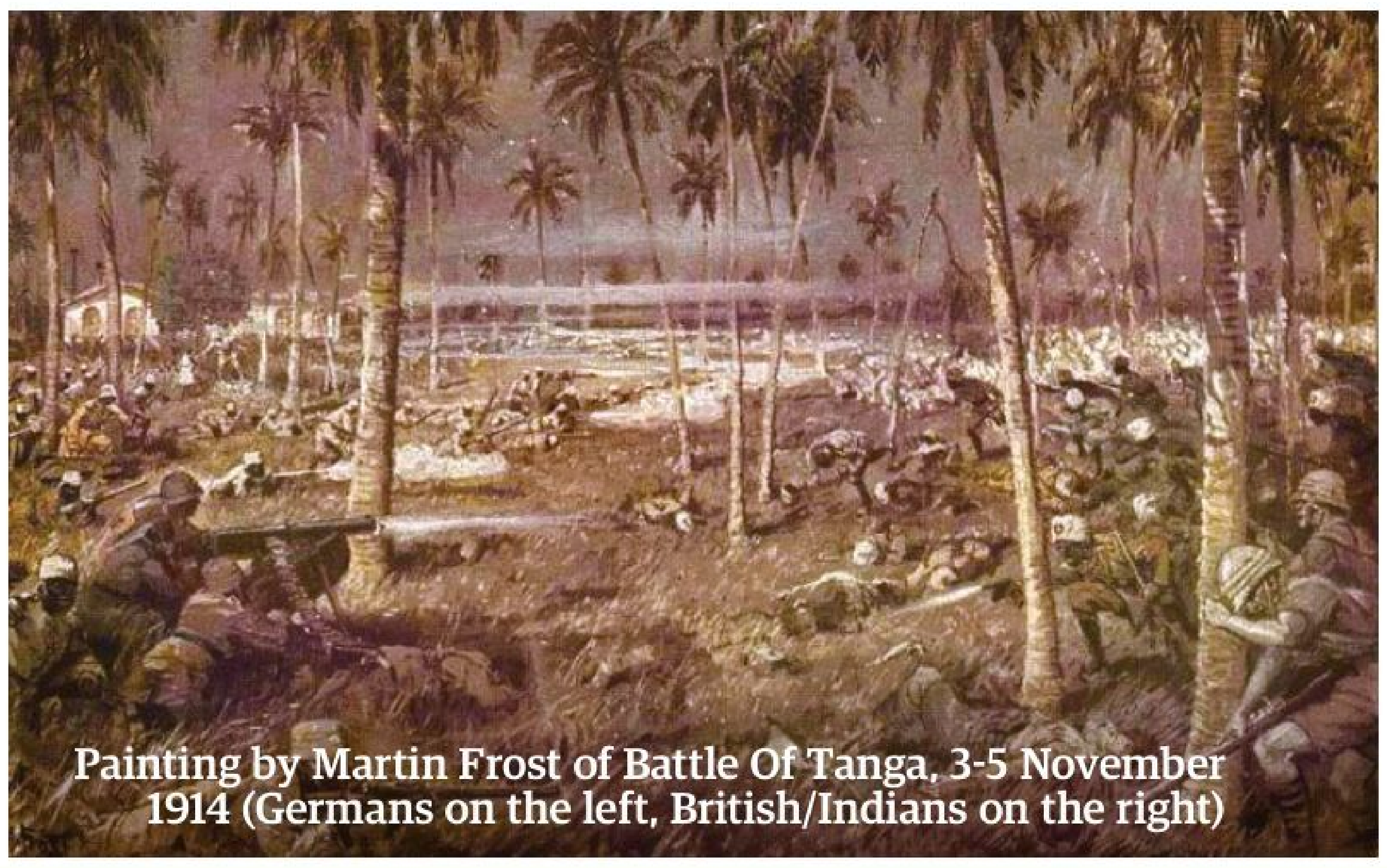
Left: A map of Eastern Shantung and the German port at Tsingtau, 1914

Sieh-kiao
Sung kia shan
Fushanhsien
Chefoo
Wei hai wei
Changfeng
BRITISH
Ninghaichow
Liangkia
Sintien
Tsisia
Laoshan
Kunlun shan
Wengteng
NEUTRAL TERRITORY
Sang-kow-wan
Fengkia
Maan shan
Laiyang
Chang shan
Chukow
Shuikowtow
Fushanchai
Shihtao
EASTERN SHANTUNG
showing the position of
TSING-TAU
Statute Miles
Kilometres
Siehfu-chwang
Haiyang
Siangshan
Kinkiakow
Wangtsun
Tsimo
Laoshan Bay
Chengyang
Surveyor I.
Bay
Hosi
Sifang
Siaotsunchwang

OCTOBER-NOVEMBER 1914

East Africa

An ambitious plan to invade German East Africa, employing two Indian brigades, was defeated by their German opponents in the Battles of Tanga and Kilimanjaro during November 1914.

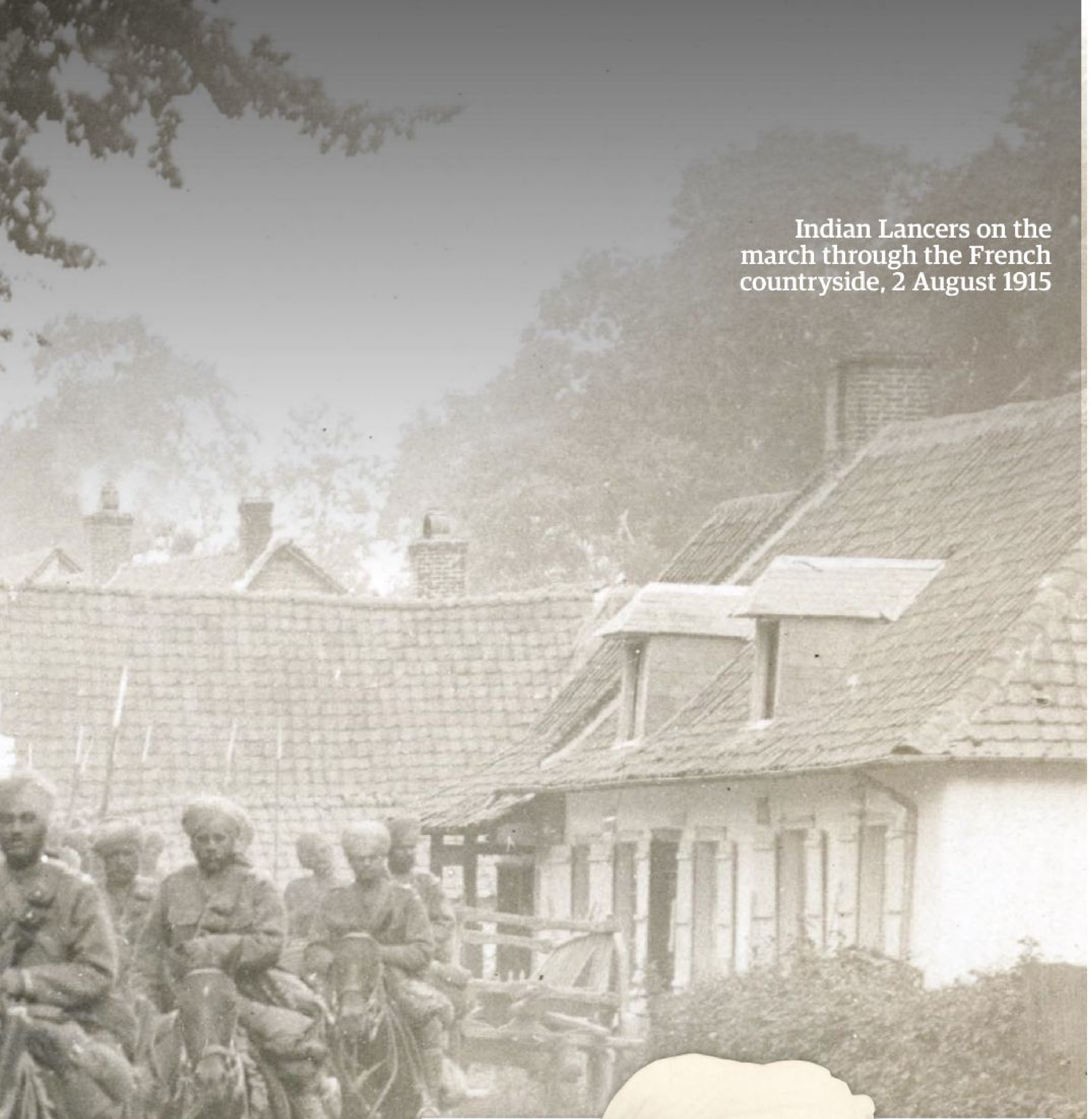


Painting by Martin Frost of Battle Of Tanga, 3-5 November 1914 (Germans on the left, British/Indians on the right)

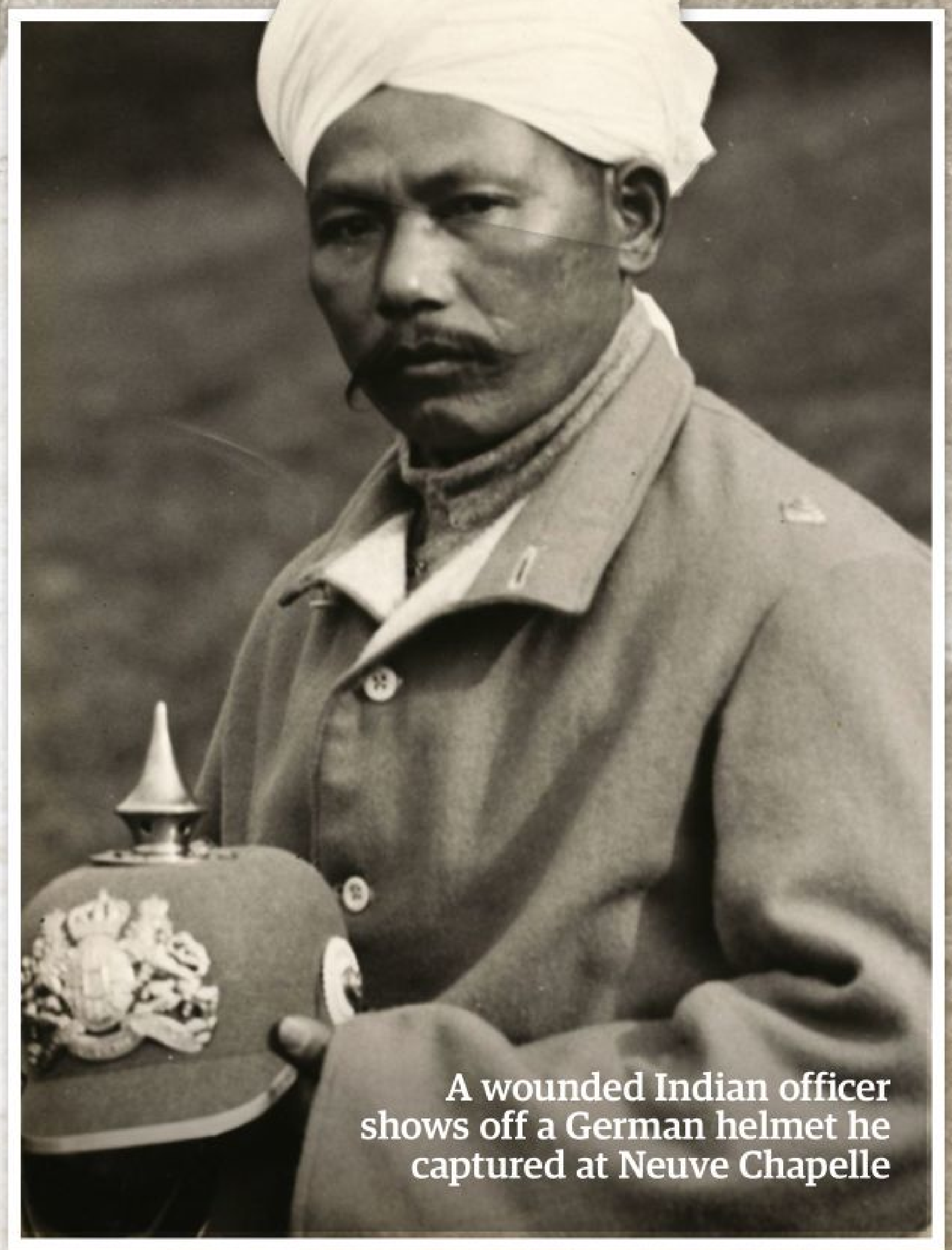
NOVEMBER 1914-OCTOBER 1918

The Campaign in Mesopotamia

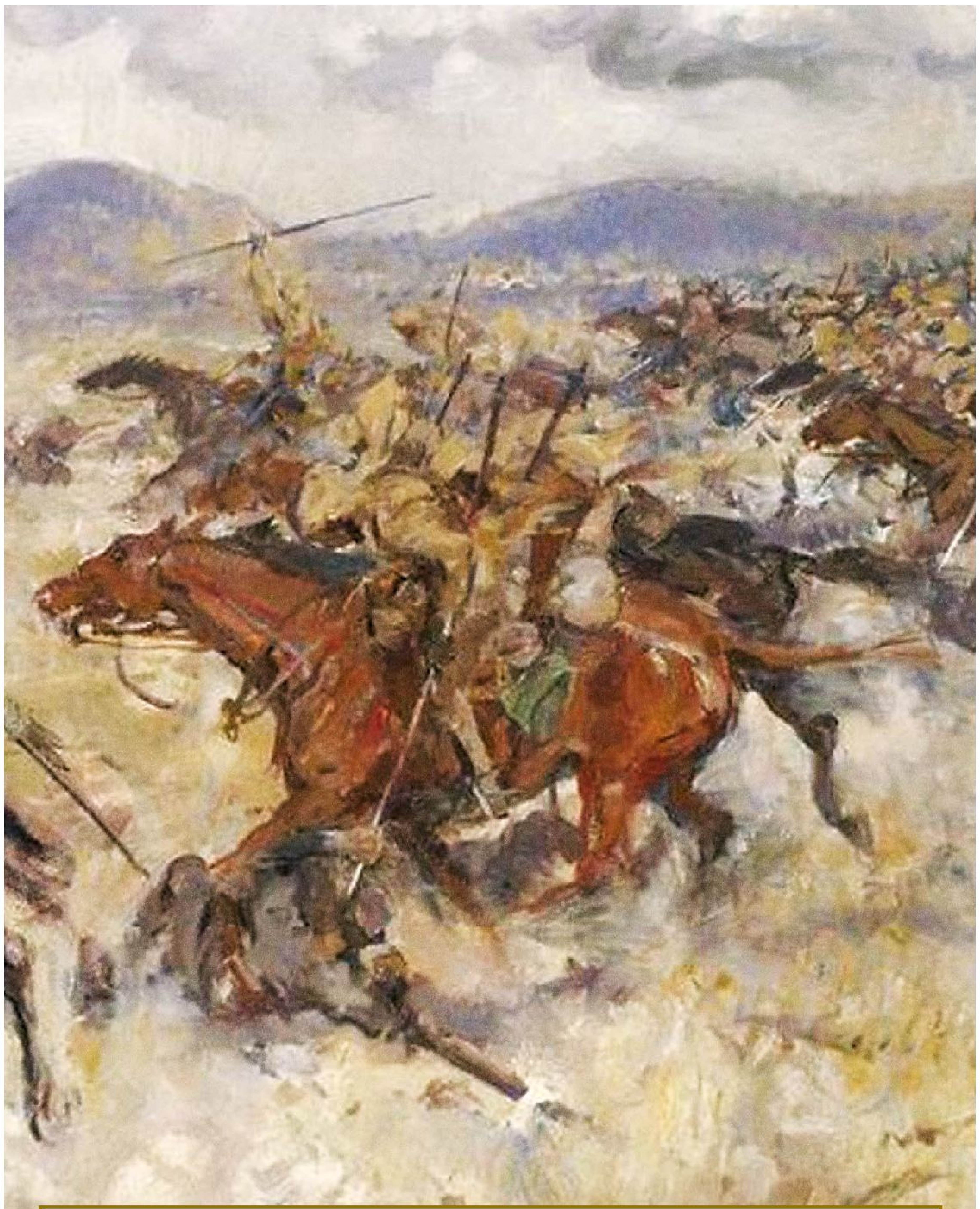
The largest force to serve abroad was in Mesopotamia, which remained a mainly Indian Army campaign. Arriving in November 1914 to protect oil installations around Basra, early success was followed by the surrender at Kut-al-Amara in April 1916. This disaster was redeemed by the capture of Baghdad in March 1917 and the Battle of Sharqat in October 1918, which contributed to the disintegration of the Ottoman Empire.



Indian Lancers on the march through the French countryside, 2 August 1915



A wounded Indian officer shows off a German helmet he captured at Neuve Chapelle



OCTOBER 1914-OCTOBER 1918

In Egypt and Palestine

Indian Forces were sent to Egypt (October 1914) to defend the Suez Canal and Sinai Peninsula against Ottoman invasion (1915-16). They then participated in the recapture of Sinai and the invasion of Palestine (1917-18). Indian troops really came into their own following the withdrawal of British troops to the Western Front, notably in the famous victory of Megiddo in September 1918, which resulted in the disintegration of the Ottoman Empire and the Armistice of Mudros in October 1918 and ended the campaign.

APRIL-AUGUST 1915

The Gallipoli Campaign

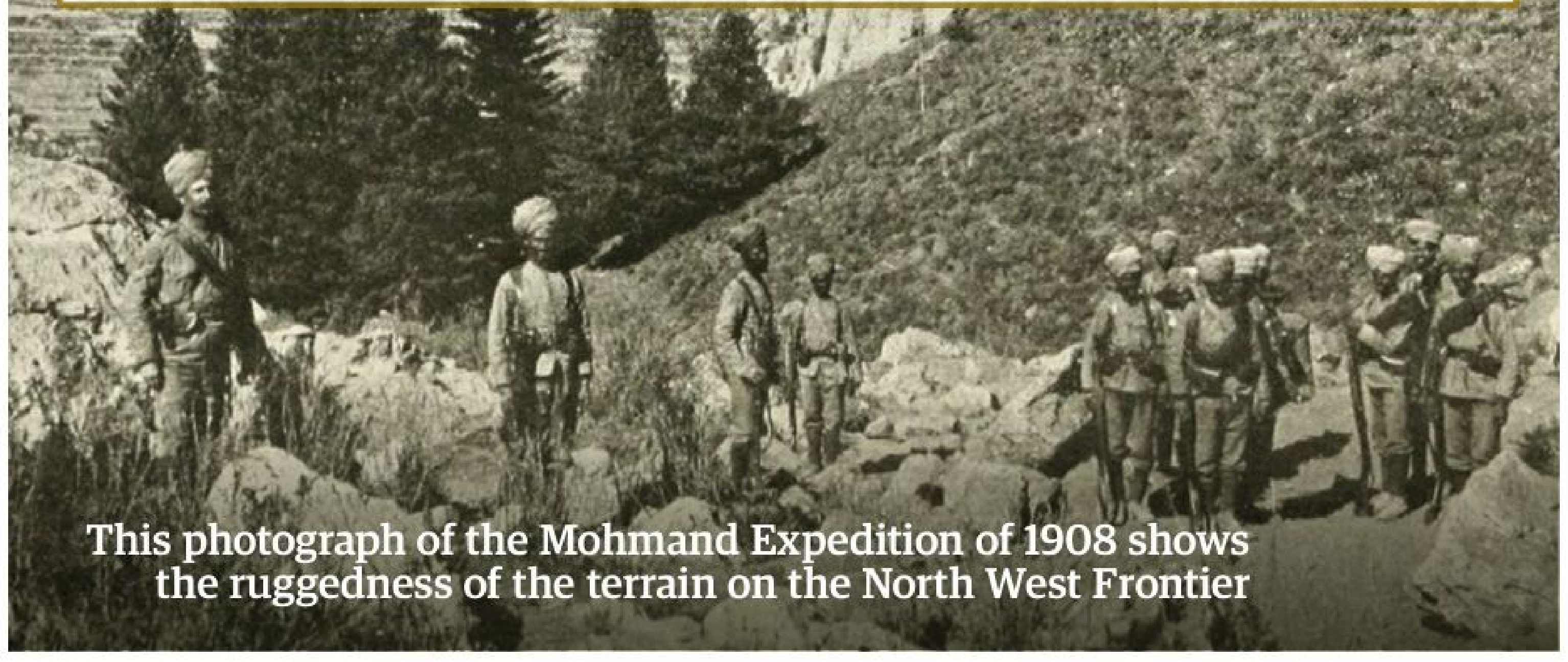
In April 1915, the 29th Indian Brigade was sent from Egypt to Gallipoli. In June, it participated in the Third Battle of Krithia, the Battle of Gully Ravine and the Battle of Sari Bair in August 1915, before being withdrawn to Egypt.

British staff officers interrogating Ottoman prisoners during the Third Battle of Krithia in August 1915

1914-19

Frontline in India

The Indian Army maintained internal security and defended India. On the North West Frontier, operations took place against the Tochi (1914–15), the Mohmands, Bunerwals and Swatis (1915), Kalat (1915–16), Mohmand Blockade (1916–17), the Mahsuds (1917), the Marri and the Khetran (1918) and in the Third Afghan War (1919). On the North East Frontier, punitive actions were launched in Burma against the Kachins (1914–15) and the Kuki (1917-19).



This photograph of the Mohmand Expedition of 1908 shows the ruggedness of the terrain on the North West Frontier

What was it like? LONDON, 1915

The Royal Exchange, situated in the heart of London

Finance

GDP was on the rise in 1915 and would increase by around 14 per cent between the war's beginning and end. While the rise of industries like shipbuilding and munitions also helped - coupled with what was saved by food rationing - the UK was forced to borrow heavily from the US.

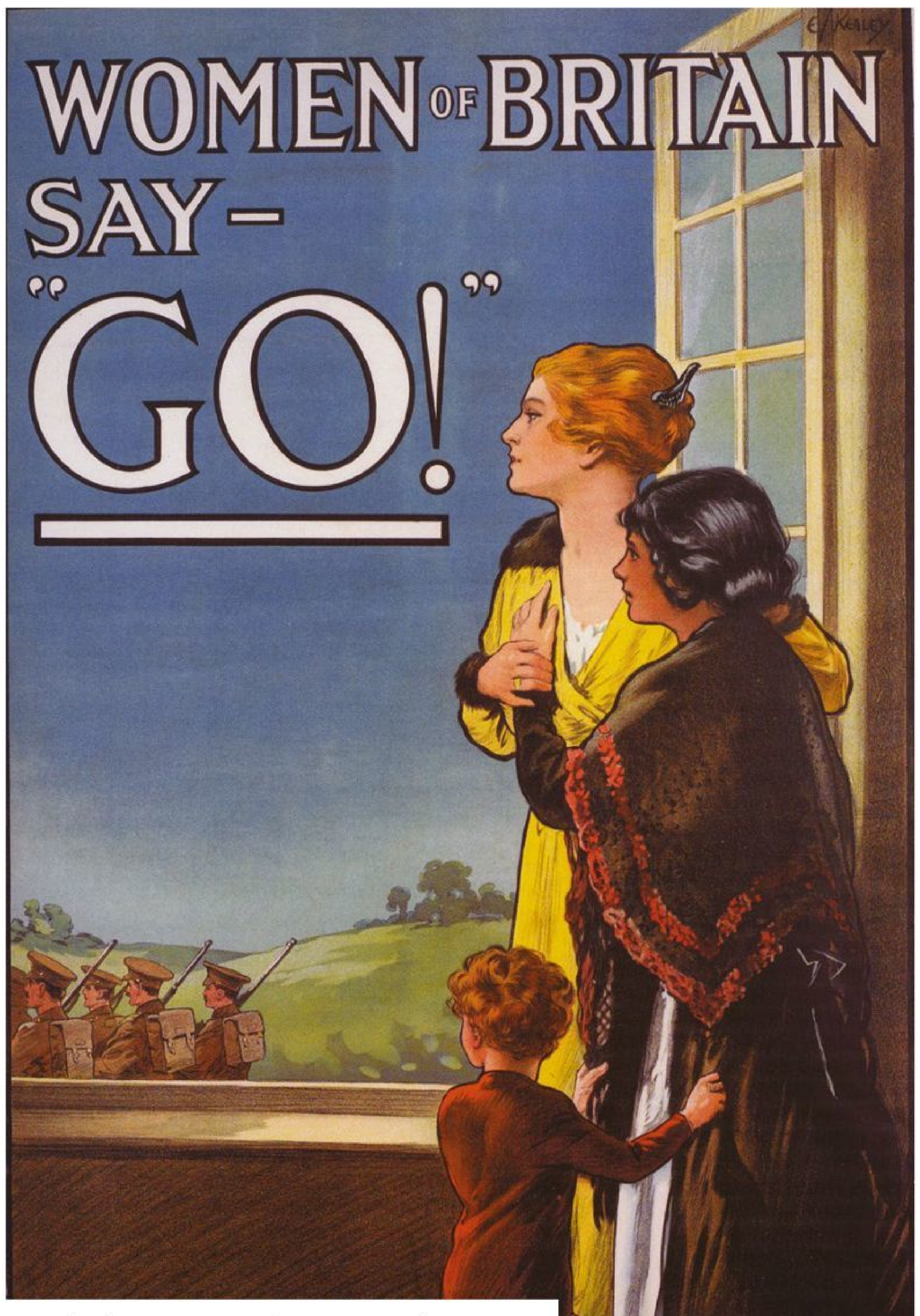
Discover what life was like in a city in the grip of a war like nothing the world had ever seen before

Britain in 1915 was a far cry from the representative democracy it is today, with women being denied the same voting rights allotted to their male counterparts and society very much divided by class. The first-ever industrialised war saw millions of soldiers sent abroad to fight but the German Zeppelin raids on the capital ensured that for the first time in modern history, the whole country was at conflict; no one was really safe. As such, the entire nation was geared toward the war effort, with virtually all of the country's population and resources being mobilised to contribute in the most efficient manner possible.

Although this state of total war wasn't as pronounced as it would be in WWII, with the damage caused by the Zeppelins and along some costal towns by the German Navy not as widespread or destructive as the Blitz, it was still an uncertain and terrifying time for the country. London itself was the hub of the war effort, with events like the 1915 Treaty of London (which saw Italy join the Allies) highlighting its importance not just to Britain, but Europe as a whole.

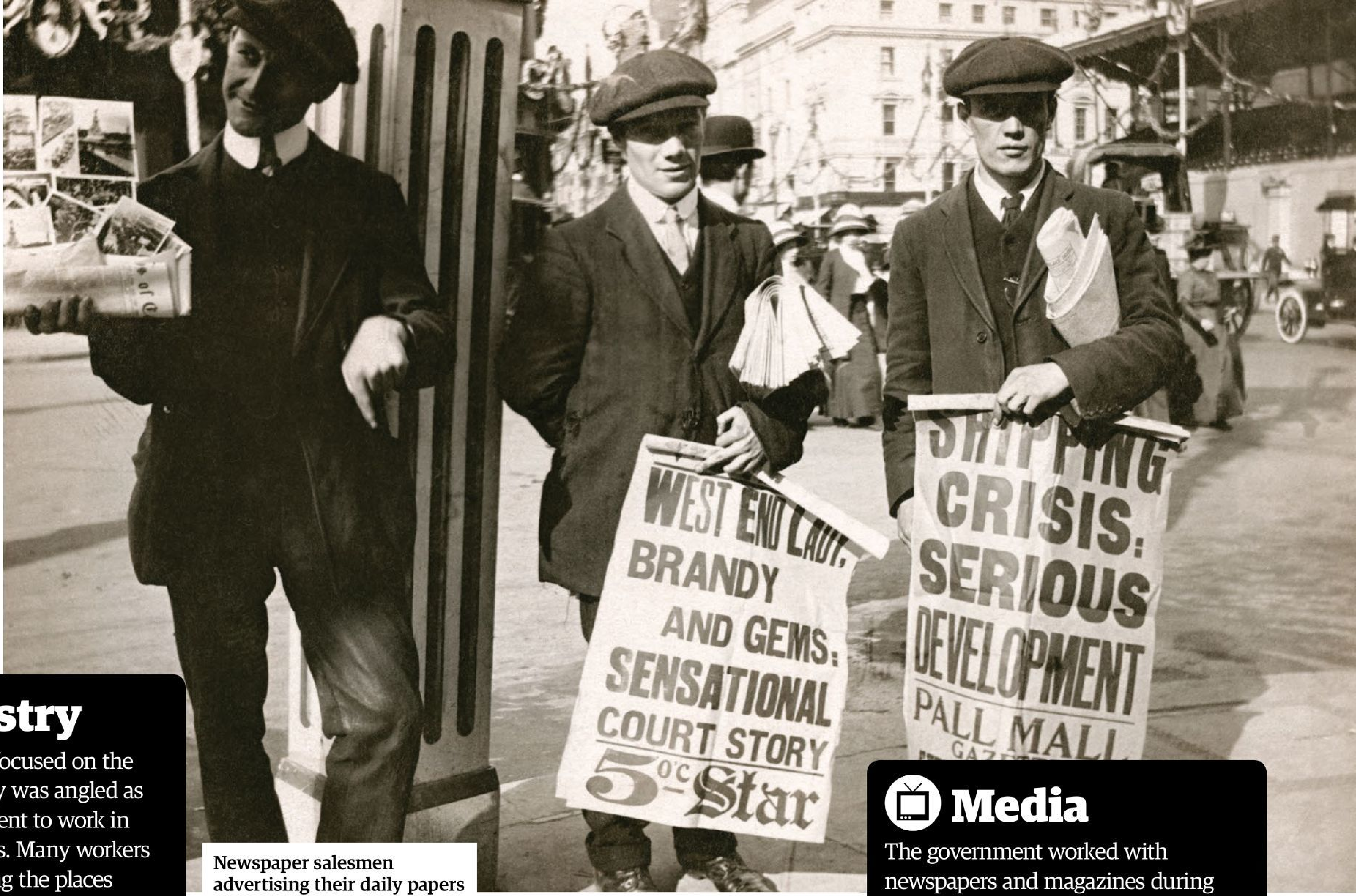
Art

Much of the art during this period was heavily influenced by the war and much propaganda was produced. Films like The Battle Of The Somme in 1916 were very popular and writers like HG Wells and Rudyard Kipling wrote government- assigned pieces.



Patriotic propaganda was used to encourage women to aid the war effort

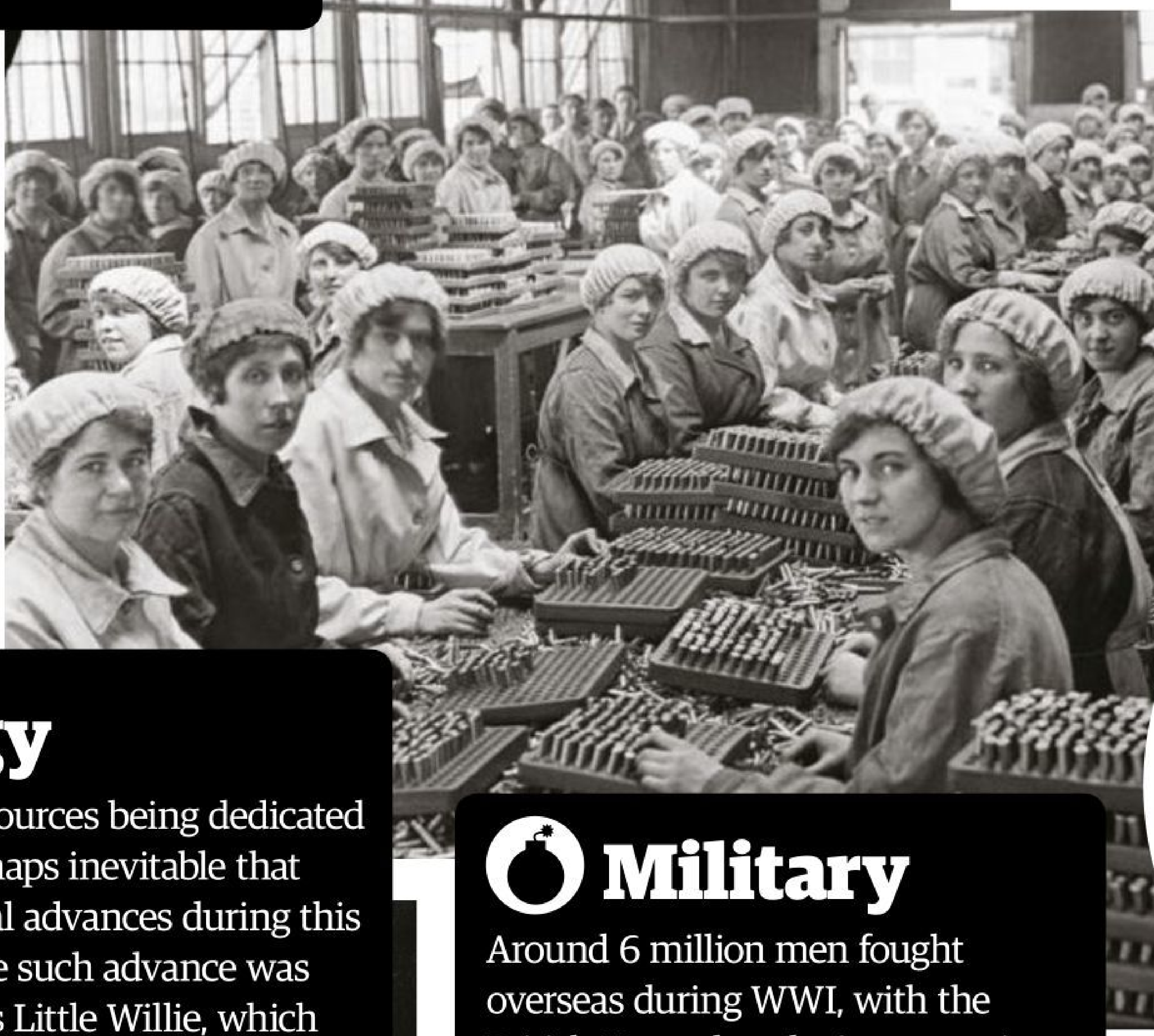
HUDSONS
NESTLE'S MILK


WEST END LADY, BRANDY AND GEMS: SENSATIONAL COURT STORY
5 o'c Star
SHIPPING CRISIS: SERIOUS DEVELOPMENT
PALL MALL GAZETTE

Newspaper salesmen advertising their daily papers

Industry

With the country focused on the war effort, industry was angled as such, with many sent to work in munitions factories. Many workers were women taking the places of their male counterparts, with 212,000 working in these factories.



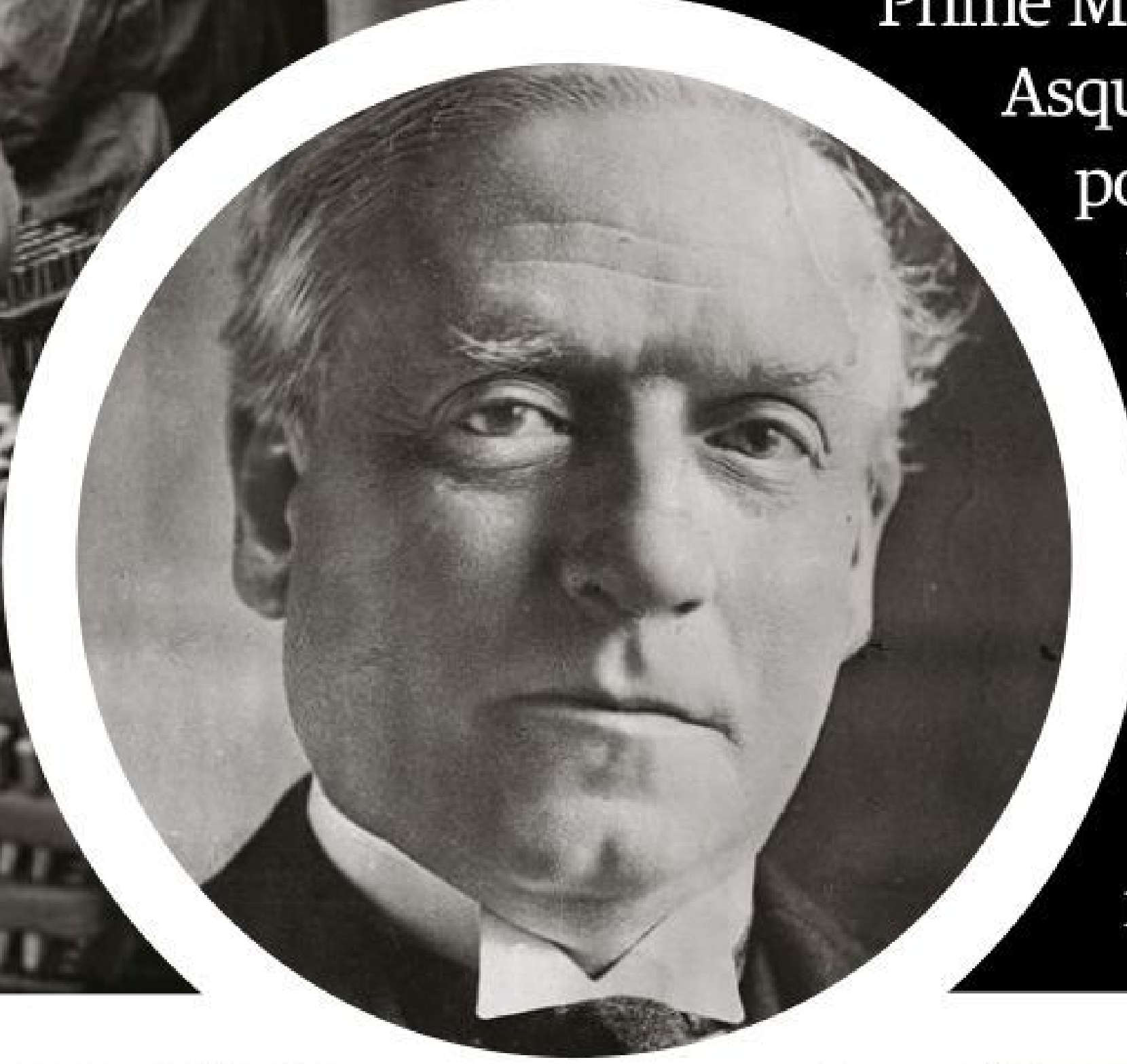
Women were recruited to work in the munitions factories

Media

The government worked with newspapers and magazines during this period, using censorship and propaganda to raise spirits and counter German efforts at the same. The Defence of the Realm Act restricted what newspapers could publish - the most popular of which were the *Times*, *Daily Telegraph* and *Morning Post*.

Government

Prime Minister Herbert Henry Asquith had been in power since 1908. By 1915, pressure was growing on him, with many believing he was not suited to be a wartime leader and fellow Liberal David Lloyd George replaced him in 1916.

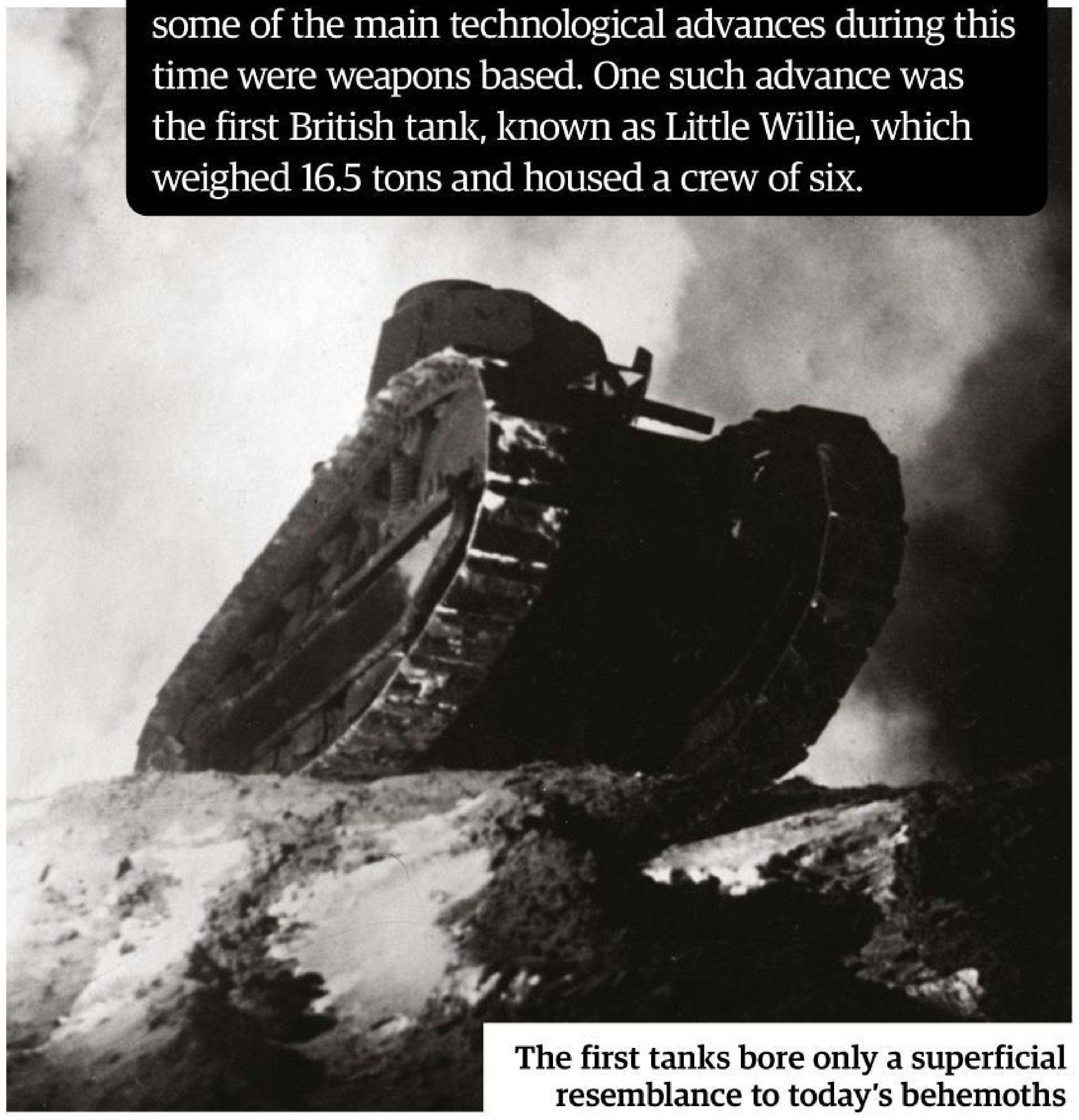


Technology

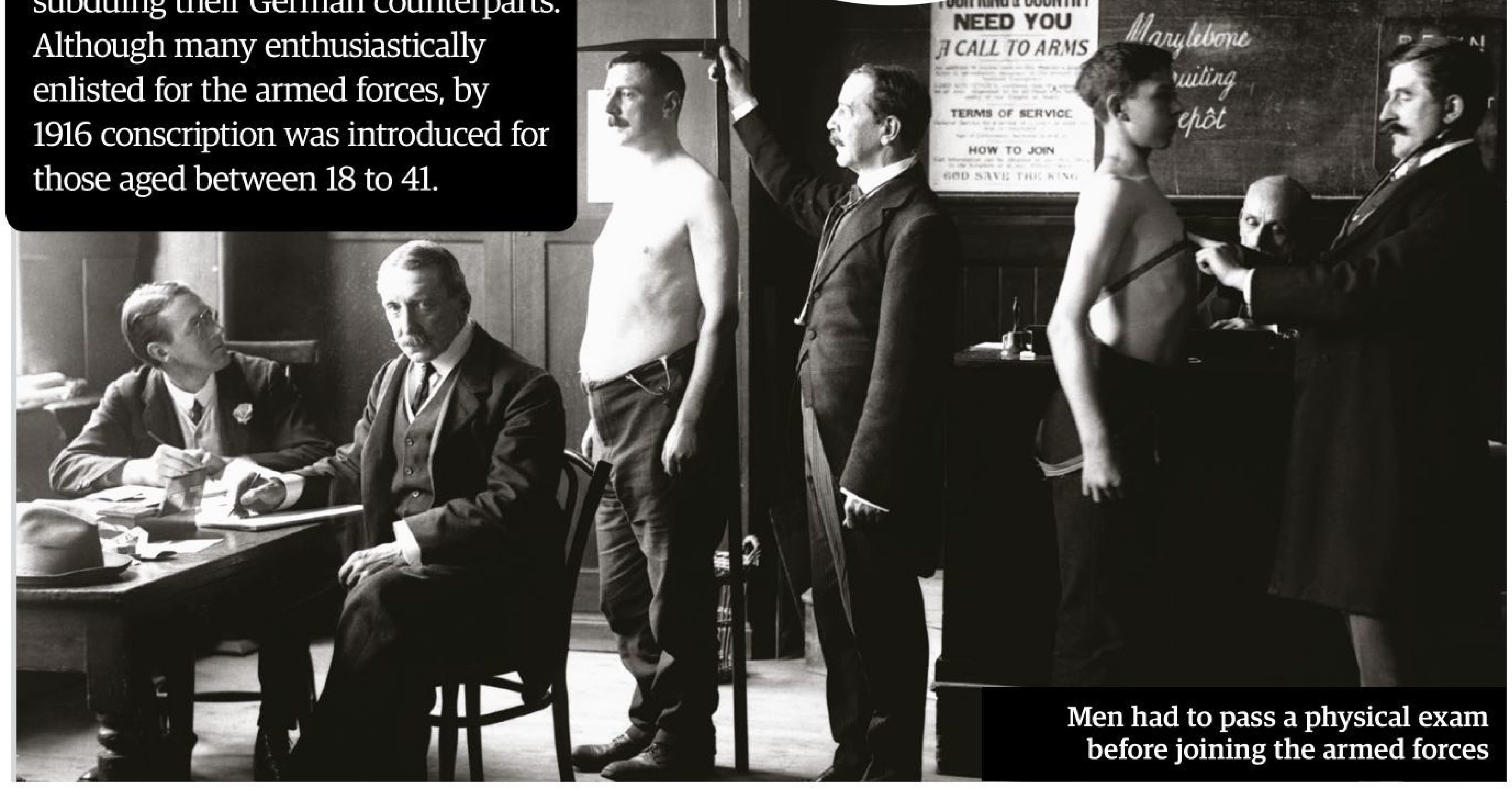
With most of the country's resources being dedicated toward the war effort, it is perhaps inevitable that some of the main technological advances during this time were weapons based. One such advance was the first British tank, known as Little Willie, which weighed 16.5 tons and housed a crew of six.

Military

Around 6 million men fought overseas during WWI, with the British Navy also playing a part in subduing their German counterparts. Although many enthusiastically enlisted for the armed forces, by 1916 conscription was introduced for those aged between 18 to 41.



The first tanks bore only a superficial resemblance to today's behemoths


YOUR KING & COUNTRY NEED YOU
A CALL TO ARMS
TERMS OF SERVICE
HOW TO JOIN
GOD SAVE THE KING
Marylebone Recruiting Depot

Men had to pass a physical exam before joining the armed forces

© Alamy; Corbis; Mary Evans

HISTORY IN PICTURES

WAR IS A LOTTERY

Blindfolded US Secretary of War Newton D Baker draws numbers of the draft lottery from a glass bowl on 21 July 1917. This lottery determined the order – by birthday – in which conscripts would join the American forces to fight in World War I alongside allies Britain, France and Russia. President Woodrow Wilson had the authority to conscript men under the Selective Training and Service Act.

1917

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ZEPPELIN

BRITAIN'S ORIGINAL BLITZ

How Germany's marauding airship fleets created the first aerial bombing campaign in history, and pioneered a new way of war

As well as coastal towns, Zeppelins also terrorised major British cities such as Liverpool and London on a regular basis

WARS

19 January 1915, Great Yarmouth, Norfolk, England. Samuel Smith, a 53-year-old cobbler, is working late. He needs to – he needs the money to provide for his aging mother and the two orphans she's recently taken into her home. At about 0830 hours, as he's finishing up his work, he hears a distant throbbing. It grows ever louder, until his workshop is shuddering and its windows are rattling in their frames.

A mystified Smith lays down his hammer, opens his workshop door and steps out into the cold, clear night. He stands on the cobbles and looks up: above him, almost skimming the rooftops, is what must have looked like something conjured up by HG Wells or Jules Verne. A giant silver airship, more than 500 feet long, looms above, lit up by the harsh moonlight. It is so vast, in fact, that it's longer than the street Smith is standing in. He watches mesmerised as it rumbles overhead right up until the moment the 110-pound bomb it drops spirals its way down to where he is standing. He is killed instantly and, along with his 72-year-old neighbour Martha Taylor, becomes the earliest victim of an air raid over Britain.

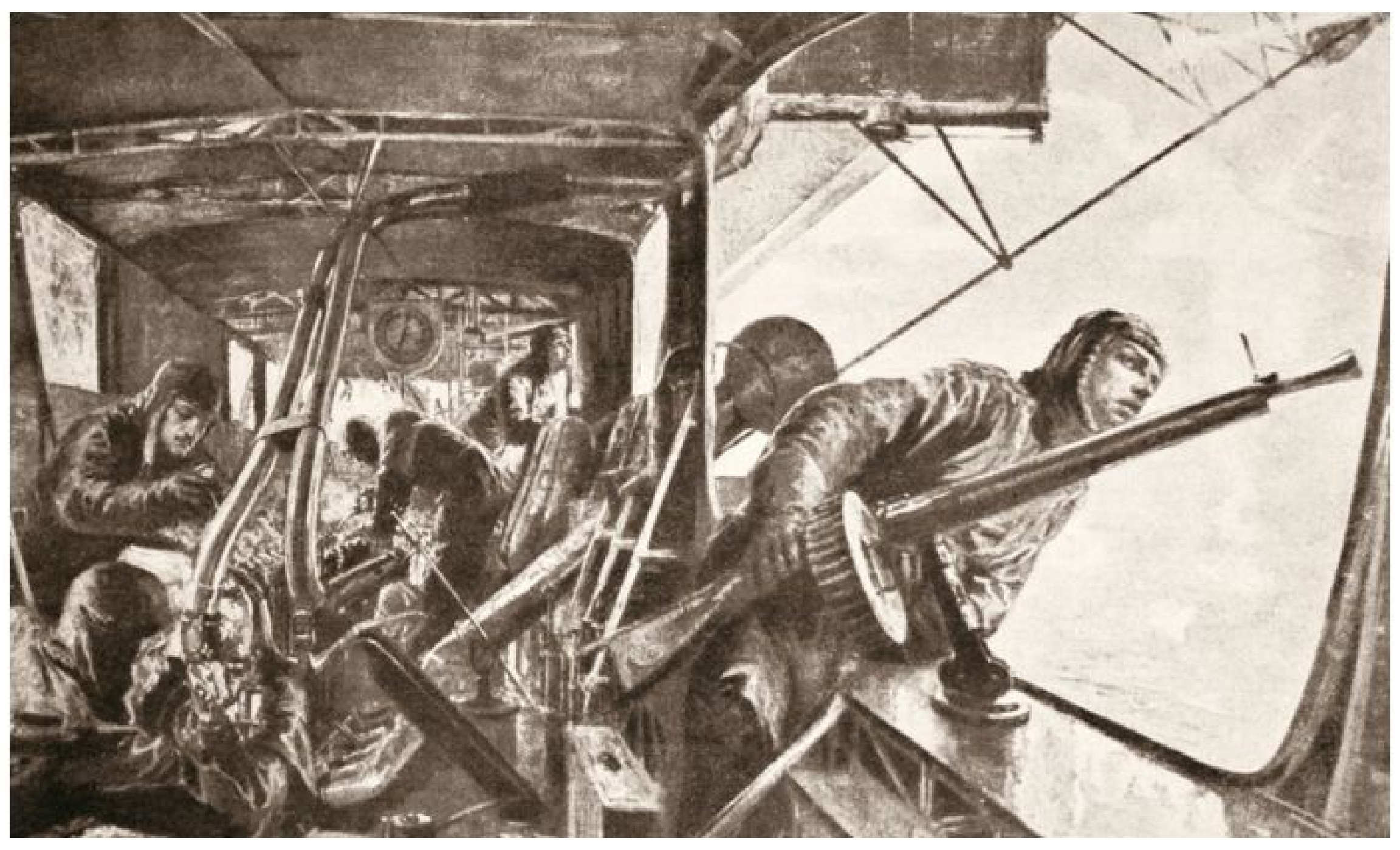
Back in Germany, Commander Peter Strasser, of the German Navy's recently formed Airship Division, is thrilled. His plan to bring an end to the stalemate on the Western Front's battlefields by bombing Britain's civilian population into submission has got off to a successful start. War will never be fought the same way again.

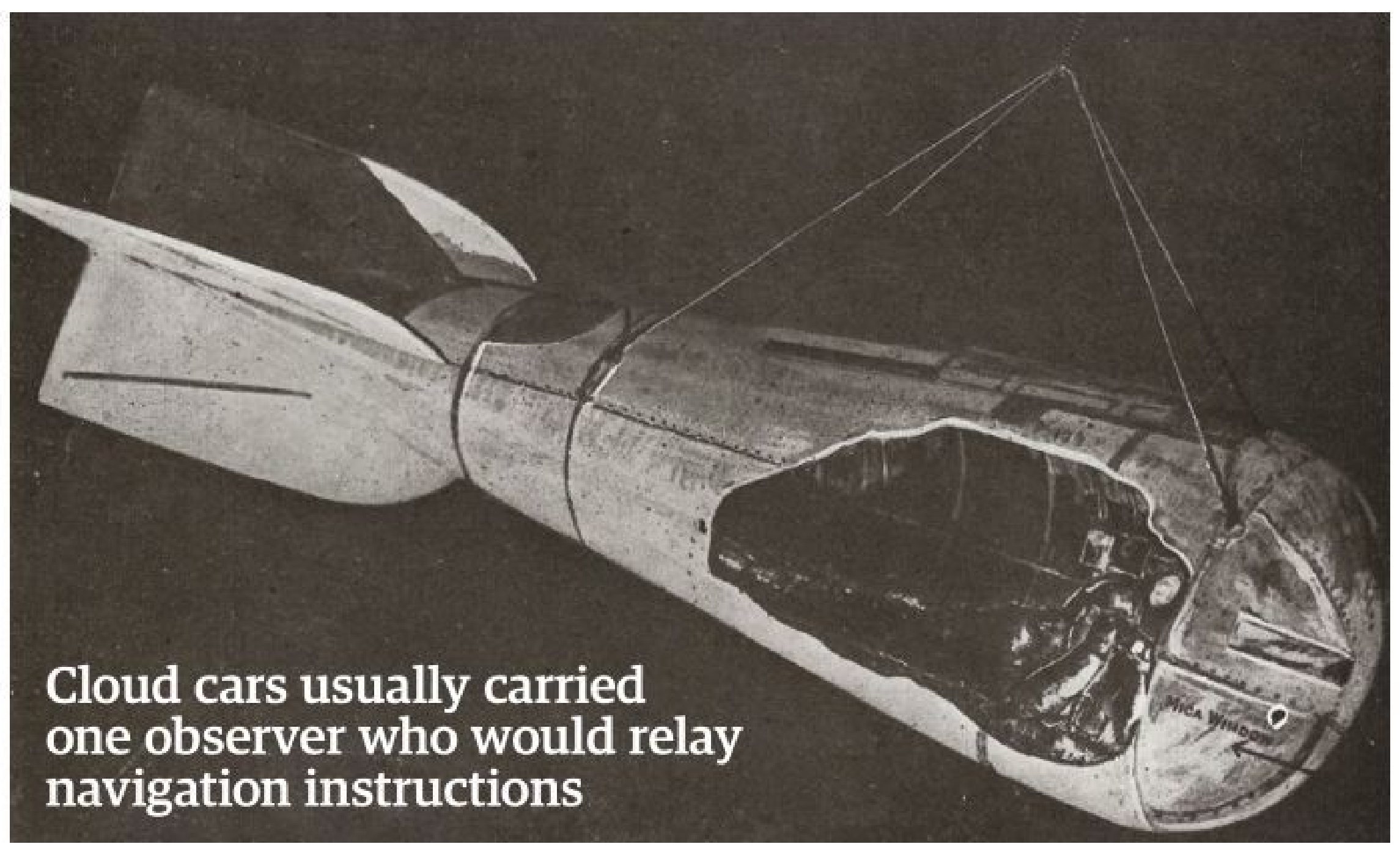
Inside a war zeppelin

The terrifying world of the floating killing platforms, and the men who manned them miles above the ground

Both the German army and navy operated zeppelin crews during the war. Thanks to the efforts of Peter Strasser, however, its navy really pioneered and pushed the bombing of civilian targets in Britain.

Whichever branch of the services these soldiers came from, those who manned the zeppelins were essentially Special Forces operatives. All were highly trained volunteers, who conducted high-risk operations from deep behind enemy lines, using state-of-the-art technology. Science was initially on their side, and for a brief moment in 1915-16, during the so-called 'Zeppelin Scourge', the bombing behemoths that they manned ruled the skies. They were giants in the sky who simply couldn't be slain. However, as time went on and the technological balance began to shift, their missions became increasingly perilous.





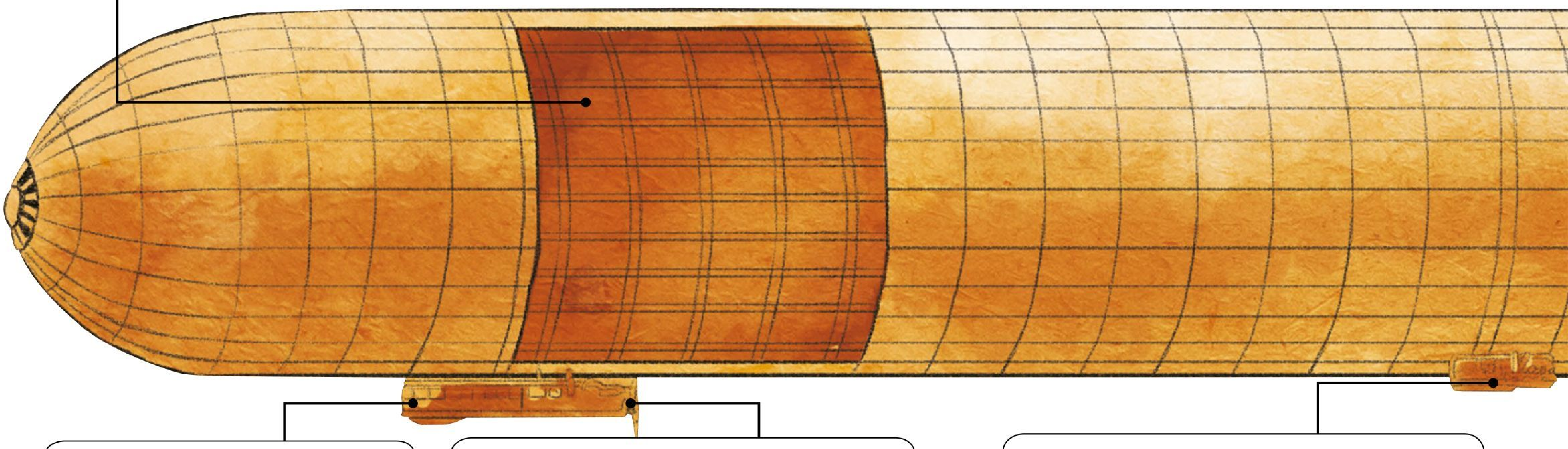
Cloud cars usually carried one observer who would relay navigation instructions

Even without the emerging dangers of weaponry that could blast them out of the skies, however, the life of a zeppelin crewman was hazardous. Their workplace was a world of cogs and levers, suspended two miles above the Earth's surface by a battleship-sized balloon filled with highly flammable hydrogen.

While these floating death traps grew increasingly bigger as the war went on, crew sizes remained roughly the same as planners wrestled with equations about weight and altitude. On average, 20 men were required to steer these monstrous killing platforms across the Channel. Their roles included airship commanders, wireless operators, navigators, ruddermen and elevatormen, who would control direction and height, sail makers to repair tears and bullet holes in the hull, plus an assortment of mechanics and bombardiers.

All crewmen were also trained to use the on-board defensive machine guns, although these were often left behind or dispensed with once airborne, along with parachutes. Both items were simply considered unnecessary weight in an environment where being able to climb rapidly was your only real hope of surviving combat.

> "Whichever branch of the services they came from, those who manned the zeppelins were essentially Special Forces"



Gas bags
As opposed to blimps, which are merely pressurised balloons, zeppelins were kept aloft by thousands of bags filled with hydrogen gas. These were made from goldbeater's skin – which is actually the outer membrane of a cow's intestine. Primarily used as sausage skin, so much of it was demanded by the zeppelin factories that sausage production was suspended in parts of Germany during the war.

Forward control cabin
This was the main flight deck where the airship commander, navigator, ruddermen, elevatormen and wireless operator would have worked. Most of the engineers were stationed in the rear gondola of the zeppelin serving the main engines in an environment that was as noisy as it was dangerous.

Engines
These were housed on the gondolas. Although they varied in size and weight, a typical engine for later R-class airships was the six-cylinder Maybach HSLu. It produced 240hp and six were used to power the ship – one on the front cabin, two on the side gondolas and three on the rear. They could produce a top speed of 63 miles per hour and could propel the zeppelin to over 13,000 feet.

Cloud car
It may look like a high-risk fairground ride, but this was actually an observation platform. If a zeppelin became temporarily unaware of its position, an observer could be winched down from inside the hull up to half a mile below to spot for landmarks. He could then relate back to the bombardiers above by telephone. To make it safer, a lightning conductor was built into the suspension cable.

THE ZEPPELIN BLITZ

25 years before Nazi bombers set London ablaze, Britain's capital was attacked by airship raiders

On the night of 8 September 1915, Zeppelin LZ13 slunk over the Norfolk coast. It then followed rivers and canals south until its commander Kapitanleutnant Heinrich Mathy spotted London's lights sparkling on the horizon. His intended target was in sight.

This wasn't the first time a zeppelin had bombed London. There had been three earlier attacks on the capital, the first in May 1915 and the last just the previous night. In total, 35 civilians had been killed and a further 121 wounded. All of those attacks, however, had been on the city's suburbs east of the Tower of London. Kaiser Wilhelm, the German emperor, had been very specific about where his marauding knights of the sky could attack. After all, he had family in town – George V was his first cousin and the Tower was the British king's most easterly royal property in the city. Tonight, however, would be different. Tonight, Mathy had the kaiser's blessing to torch the heart of the city. London was about to experience its first Blitz.

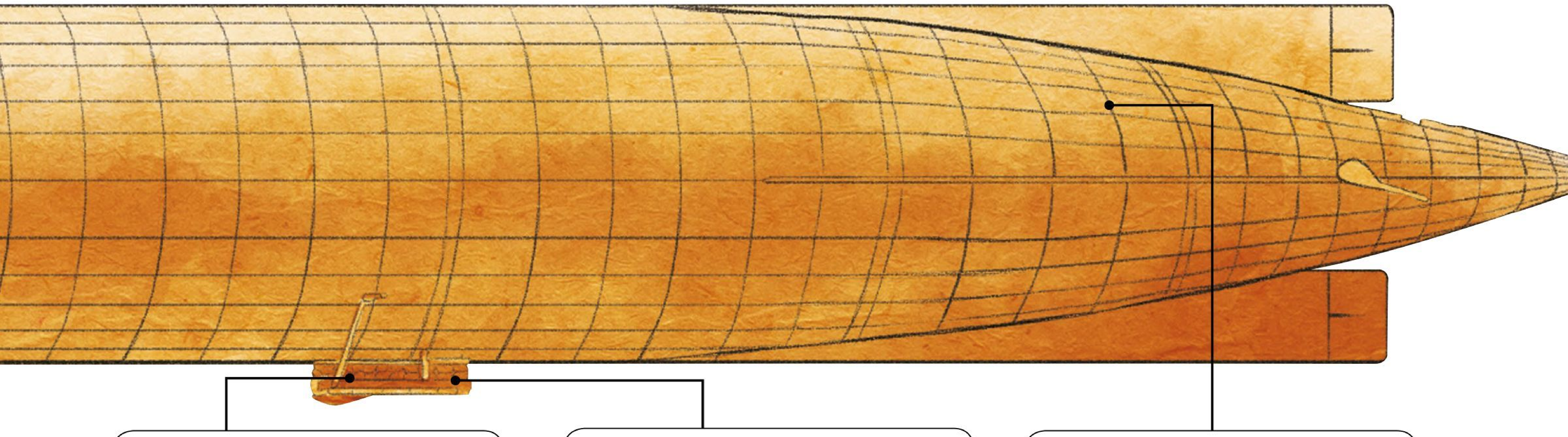
Mathy released his first bombs from 8,500 feet, hitting Euston station at about 10.40pm. Lit up by searchlights and with shrapnel from London's anti-aircraft batteries exploding all around him, he headed south. Next to be hit were Bloomsbury and Holborn. The city below him was now on fire, and the streets filling up with the wounded and the dead. Passing north of Saint Paul's, Mathy's zeppelin rained down incendiary bombs on textile warehouses as he steered towards Liverpool Street station. Here, he unleashed his deadliest attack, when a single bomb killed nine people on a bus.

The devastation caused by the zeppelin raid on the night of 8 September 1915 was a foreshadowing of the London Blitz 25 years later

By the time LZ13 crept into clouds and back across the Channel, London – the heart of the British Empire – was ablaze. 55 incendiary bombs had left a river of fire burning in the zeppelin's wake. Mathy had also unleashed 15 high-explosive bombs, including one with a 660-pound payload – far bigger than anything that had previously been dropped on Britain. The night-time raid had caused the modern equivalent of £23 million worth of damage to the city, had injured 87 Londoners and killed 22 more.

It had also proven that London was defenceless against air attack. Just six planes had intercepted the zeppelin, with zero success. The 26 anti-aircraft guns assigned to protect the capital, meanwhile, were too feeble to hit the airship. When some anti-aircraft fire had come close, Mathy simply took the zeppelin up to 11,200 feet, well out of their range, and carried on bombing from there.

It was shock and awe, early 20th century style. As the writer DH Lawrence, who witnessed the raid, wrote in a letter to a friend: "Then we saw the zeppelin above us, amid a gleaming of clouds, high up… and underneath it were splashes of fire as the shells fired from Earth burst. It seemed as if the cosmic order were gone, as if there had come a new order. The Moon is not queen of the sky at night. It seems the zeppelin's taken control."



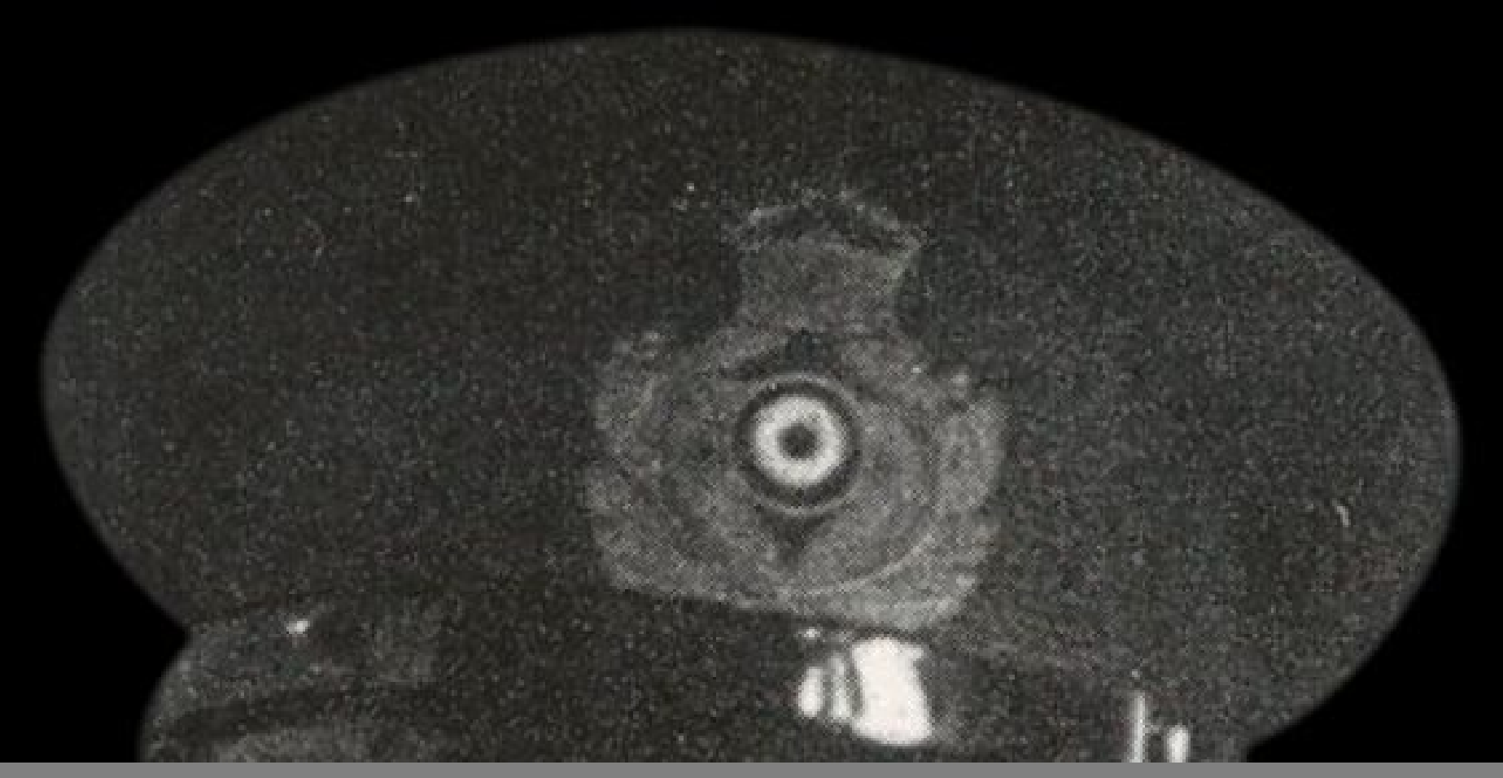
Machine Gunner
There were usually several fixed points both on top of the zeppelin and beneath it where machine gunners, operating in temperatures as low as -30 degrees Celsius, could defend the airships against attack from fighters. Gunners wore helmets, gloves and cold-weather clothing once airborne, but often no parachutes.

Bomb bay
Located in the bottom of the hull, this could hold payloads that weighed up to 4,000 pounds. The bombs were usually a mix of larger high-explosives designed to shatter rooftops and smaller incendiary devices that could then be dropped into buildings to set them ablaze, as was the case with the London raid of 8 September 1915.

Structure
Zeppelins were typically built around a rigid skeleton of strong but lightweight aluminium girders over which a huge skin, made from chemically treated cotton, was then stretched. A main cable ran, attached at various points to the framework, through the entire length of the hull to give the ship longitudinal strength.

Illustration: Rebekka Hearl

The world goes to war



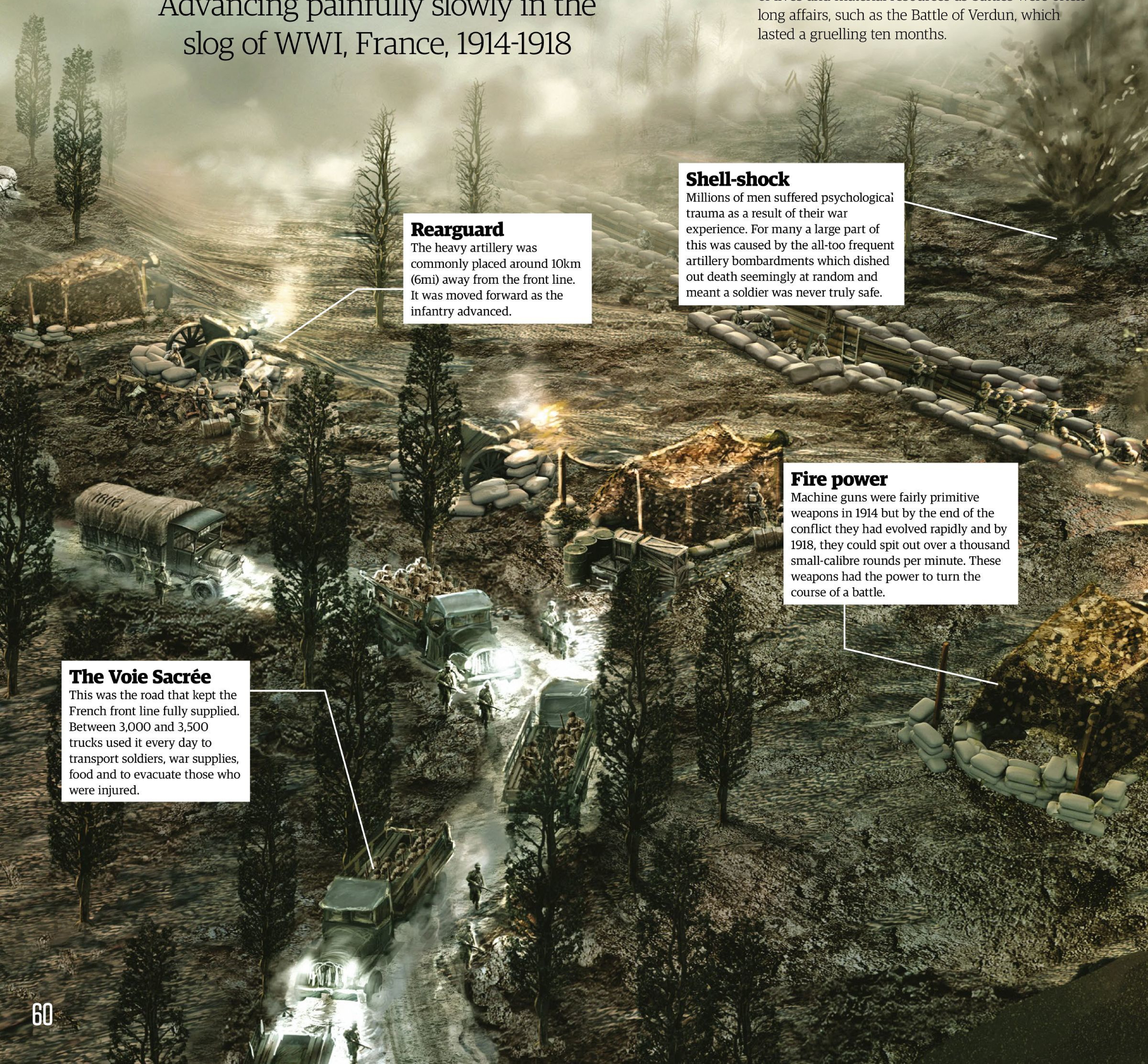
The end of the zeppelins

Once thought unstoppable, the mighty zeppelins' dominance of the skies turned out to be short-lived. Their legacy, however, is daunting

Trench Warfare

Advancing painfully slowly in the slog of WWI, France, 1914-1918

The assassination of Franz Ferdinand may have lit the touch paper for WWI but the conflict erupted due to a number of reasons, such as France and Russia forming a military alliance in 1894, which increased German isolation, and the second Balkan War. In the conflict, which lasted from 1914 to 1918, the countries were divided into two groups: the Allies, led by Great Britain, France and the United States, and the Central Powers, which included Germany, Austria-Hungary and Turkey. During the first years of the conflict, the armies stood still in trench lines or position wars. This caused the loss of thousands of lives and material resources as battles were often long affairs, such as the Battle of Verdun, which lasted a gruelling ten months.



Rearguard
The heavy artillery was commonly placed around 10km (6mi) away from the front line. It was moved forward as the infantry advanced.

Shell-shock
Millions of men suffered psychological trauma as a result of their war experience. For many a large part of this was caused by the all-too frequent artillery bombardments which dished out death seemingly at random and meant a soldier was never truly safe.

Fire power
Machine guns were fairly primitive weapons in 1914 but by the end of the conflict they had evolved rapidly and by 1918, they could spit out over a thousand small-calibre rounds per minute. These weapons had the power to turn the course of a battle.

The Voie Sacrée
This was the road that kept the French front line fully supplied. Between 3,000 and 3,500 trucks used it every day to transport soldiers, war supplies, food and to evacuate those who were injured.

No-man's-land
This is the term used to describe the land between opposite enemy lines. It was frequently covered with mines and craters caused by bombs and as such was difficult to cross, which contributed to the lack of progress made by both sides.

Wire fences
The trenches were protected by long lines of wires with intertwined barbs. They constituted a great challenge for the advancement of the enemy infantry units and many men became tangled on them and provided their enemy with an easy target.

Aviation
Planes frequently flew over trenches, whether firing at the enemy with machine guns or while engaged in a dogfight or a scouting mission.

Tunnels
Some German shelters were connected by tunnels that allowed the transportation of soldiers without the need to be exposed to enemy fire.

Front line
The first trench was usually the most dangerous one as it was closest to the action. Soldiers had to protect themselves from enemy fire and artillery.

Second trench
This served as a reserve for the front line. It used to have refuges located at a depth exceeding 10m (33ft) to bear the direct impact of heavy artillery.

© Sol 90 Images

Russian troops, attempting to reach the German lines are killed by enemy fire as they attempt to breach the barbed wire entanglements, c.1917

Eastern front 1917

Grave of Russia's Imperial Army

It saw the most casualties in WWI, yet the Eastern Front is often overlooked, subsumed in the narrative of revolution and civil war

It was a Pyrrhic victory with nearly one million casualties, half of these lying dead on the battlefield, yet Russia's high watermark on the Eastern Front in WWI came with a savage battle with Austria-Hungary in Carpathia, which almost knocked the latter out of the war.

The Brusilov Offensive – the only campaign of the Great War named after an individual, Aleksei Brusilov – was fought between June and September 1916, and saw the eponymous general almost pulling off the spectacular, only to be thwarted by a combination of Austria-Hungary's allies bailing them out and Romania proving to be a weak cog. Instead of anchoring the Russian line in the south, the Romanian rout resulted in a general retreat, a collapsing situation only saved by the onset of winter. This could have been the fulfilment of Russian chief-of-staff General Mikhail Alekseev's vision, at the start of 1916, that a concerted effort could knock Austria-Hungary out of the war.

The combination of the summer losses and morale-sap of Russian divisions being sent into Romania to stem the Central Powers' advance there, proved too much for the Imperial Russian Army. If there were a moment when the collective Russian will was broken, it was here; a near triumph that turned into another debilitating setback. Ironically, the Russians had cultivated Romania, believing it would be an asset in any Galician campaign; it proved to be anything but.

Significantly in October 1916, small anti-war incidents began to occur in some Russian corps, and Maurice Paleologue, the French ambassador to the court of Russian Tsar Nicholas II, reported that, "… war-weariness and food shortages caused disorders throughout many Russian cities in the autumn of 1916. They were the heralds of the Revolution of 1917." Factories in Petrograd went on strike and when French Renault workers tried to continue working, they were set upon by strikers. The police called in the infantry, who sided with the strikers, leaving the Cossacks to restore order.

When war had first broken out, Russia, in common with other belligerents, optimistically believed it would be brief and victorious. For this reason, it failed to factor in how material and human replacements for those expended would be produced and deployed. A lack of ammunition would soon hit crisis point.

Unlike the industrial nations, the country did not have a reserve of manufacturing that could be turned over to war production, or an effective bureaucracy to co-ordinate the effort. As well as (mostly) incompetent officers, the Russians suffered from a lack of everything – particularly artillery – required to wage a modern war. The only thing it had in abundance was manpower. A Russian division in 1914 numbered in the region of 15,000 men. Upon mobilisation, Russia's army totalled 115 infantry and 38 cavalry divisions (around 2,300,000 men), but with only around 8,000 artillery pieces. The difficulty the Russians faced with such an extensive front and so many opponents was illustrated by fewer than 30 per cent of its available divisions lining up against the Germans in the north.

With the war going badly and unrest increasing, Nicholas II may have regretted his decision of September 1915 to relieve Grand Duke Nicholas Nicolaievich of supreme command. The tsar had taken over at this point, ignoring warnings that he could not be both soldier and statesman.

Although he proposed to act only as a figurehead, with Mikhail Alekseev controlling the army, his name would nevertheless become indelibly linked with failure, as illustrated by recriminations following the heavy losses sustained at the Battle of Lake Naroch in March-April 1916, an inconclusive Russian offensive aiming solely to relieve the pressure of the Germans at Verdun. As General Aleksandr Noskoff lamented, "Our losses were very high, numbering some 250,000. The sacrifices resulted from the personal intervention of Emperor Nicholas II." His absences at the front also meant that a clique, centred round the Germanic tsarina and the mystic-healer-meddler Rasputin, were in effective control of the government, further fuelling the amorphous discontent.

As 1916 drew to its miserable conclusion, more than a dozen regiments mutinied, with soldiers reported to be deserting in their thousands every single day. The tsar appeared incapable of controlling either the army or the government and even the murder of Rasputin cured little, suggesting instead that Russia was descending into a state of near-anarchy.

With Christmas approaching, the Russian military effort switched to the north, with an offensive planned by the Russian 12th Army (Northern Front) and Latvian units in the area of Jelgava (Latvia). Having failed to break the Austro-Hungarians, the Russians were going to have another ill-advised crack at the Germans, under General Radko Dimitriev.

World War I was a war of alliances and it was often the case for Russia that it launched an offensive due to pressure from the other Entente members. The so-called 'Christmas Battles' of late-December 1916 were a case in point. The order to attack the German 8th Army on the Riga front was given in order to attract German reserve forces, thereby relieving the pressure on the French at Verdun (Brusilov had suffered in the same way with his summer offensive, when his attack went in earlier than he'd wanted because of Italian appeals to distract the Austrians in Trentino).

The 8th Army had been held up near Riga for more than a year since October 1915, digging itself in thereafter and fortifying a 30-kilometre-long 'wall' – the grandiloquently-dubbed German Wall – constructed largely from wood and sand, which lay waiting for the Russians. The wall was built across the Tirelpurvs (or Tirelis Swamp), so was a potential nightmare for any force brave, or stupid, enough to try to take it. Mid-December saw a fall in temperature to an eye-watering (or eye-freezing) -35°C, however, it enabled the now-frozen swamp to be crossed, and the German fortifications could now be assaulted.

Determined to surprise their enemy, the Russians planned the attack for 23 December, believing that so close to Christmas, the Germans would be off-guard. The ultimate objective was Jelgava (or Mitau), a rail and road junction south west of Riga, in central Latvia. The main assault force would be VI Siberian Rifle Corps, which included two Latvian rifle brigades.

"The tsar had taken over at this point, ignoring warnings that he could not be both fighting soldier and statesman"

Russian infantry being mobilised shortly before the outbreak of war. Many would lose their life in the ensuing carnage

FOES OF THE MOTHERLAND

Nicholas II faced an almost impossible task opposing multiple nations hungry for victory

WWI's Eastern Front was never as simple as Russians and Germans going hammer and tongs. When Austria-Hungary declared war on Serbia, Russia was duty-bound to defend her Slavic ally. In addition, Russia faced a militaristic Germany, which honoured its alliance with Austria-Hungary. So the Russians waged war over a 1,600-kilometre-front that stretched from the Baltic to the Black Sea, encompassing both Germany and Austria-Hungary. If that was not enough, Turkey joined the Central Powers later in 1914, giving the Russians a third opponent from November. Three became four in September 1915, when Bulgaria threw in its lot with the Central Powers. Still smarting from defeat by Serbia in the Second Balkan War, Bulgaria saw a way of recovering its losses, especially with Serbia's protector, Russia, getting pummelled elsewhere. As the 1916 campaigning season dawned, Nicholas II saw enemies around every corner, and we haven't even mentioned the Polish Legions.

Germany

While Russia always squared up well to Austria-Hungary, it found Germany a different proposition and the final blow came in August-September 1914, with crushing defeats at Tannenberg and 1st Masurian Lakes. Germany's Schlieffen Plan failed, however, which left it fighting a war on two fronts and unable to field sufficient divisions in the east to defeat Russia. The Russian territory proved too big for Germany's army, its last attempt in September 1917, taking the northernmost end of the Russian Front in the Riga Offensive.

Turkey

Turkey joined the Central Powers in August 1914 and two months later its warships bombed Russia's Black Sea Coast. Russia's offensives against the Turks occurred in two theatres, Western Persia and Armenia. In January 1915, Russia appealed to Britain for a diversion to relieve the pressure on them in the Caucasus; one of the reasons behind the ill-fated Dardanelles campaign. Russia had the upper-hand in late 1916/early 1917, but the Revolution saw it start to withdraw from Western Persia.

Bulgaria

Bulgaria's defeat at the hands of Serbia and Greece in 1913 left it thirsting for revenge. Initially neutral, Bulgaria joined the Central Powers in September 1915, sensing an opportunity to achieve its ambition of a Greater Bulgaria, which would include the Serbian territory of Macedonia. Bulgaria would quickly declare war on Serbia. During 1916, Bulgaria attacked Greece and then Romania, which had sided with the Allies. Bulgarian troops advanced into Dobruja in August where they were opposed by Romanian and Russian troops.

Polish Legions

Poland did not exist as an independent state during WWI, Polish 'territory' was instead split between Germany, Austria-Hungary and Russia. The Poles looked to support the likely winners, gaining concessions and a promise of future autonomy in return for loyalty and recruits. Colonel Józef Piłsudski (future Polish chief-of-state) foresaw the war ruining all three empires and chose the Central Powers as his bedfellows, forming the Polish Legions to fight Russia. The Brusilov Offensive saw Austria-Hungary's Polish Legions defying Russia at the Battle of Kostiuchnówka.

Austria-Hungary

The moribund dual monarchy of Austria-Hungary facing Russia throughout the war offered the Russians their best chance of success. Unfortunately, the knock-out blow eluded them, partly due to Russian failings and partly due to the Germans' formidable clout entering the ring at just the right moment. This is well-illustrated by the Brusilov Offensive of June-September 1916, which came close to knocking Austria-Hungary out of the war, until 15 German divisions arrived from the west to put an end to all the nonsense.

Below: Two of the Russian guns captured by the Germans at the Swedish-built fortress of Dunamunde, Riga (now in Latvia), c.1917

Damaged buildings in Riga, the capital city of Latvia, following its capture by the German Eighth Army

Crammed into a rear guard trench, Russian infantry await a German offensive

A political meeting held among Russian soldiers on eastern front in May, after the first revolution of 1917

The attack duly began early that morning. As well as the surprise of the season, there was also no artillery support, which would have given the Germans advanced warning of an impending attack. By comparison, the received wisdom on the Western Front dictated a frontal assault proceeded by a huge, usually ineffective, barrage.

Sadly for the Russians, after all this planning, the attack stalled as the Germans fed in reinforcements and everything that could go wrong, did. The 17th Siberian Regiment refused to attack, a mutiny supported by several other units and then with the offensive faltering, the Germans counter-attacked. A further Russian attack on Christmas Day itself took a fortified hill (later known as Machine Gun Hill) on the northern side of the swamp, but the commander failed to anticipate this success, so the victory could not be exploited. By 29 December, the Russian attempt on the German Wall had petered out; another indecisive battle and another instance of what might have been for the Russians.

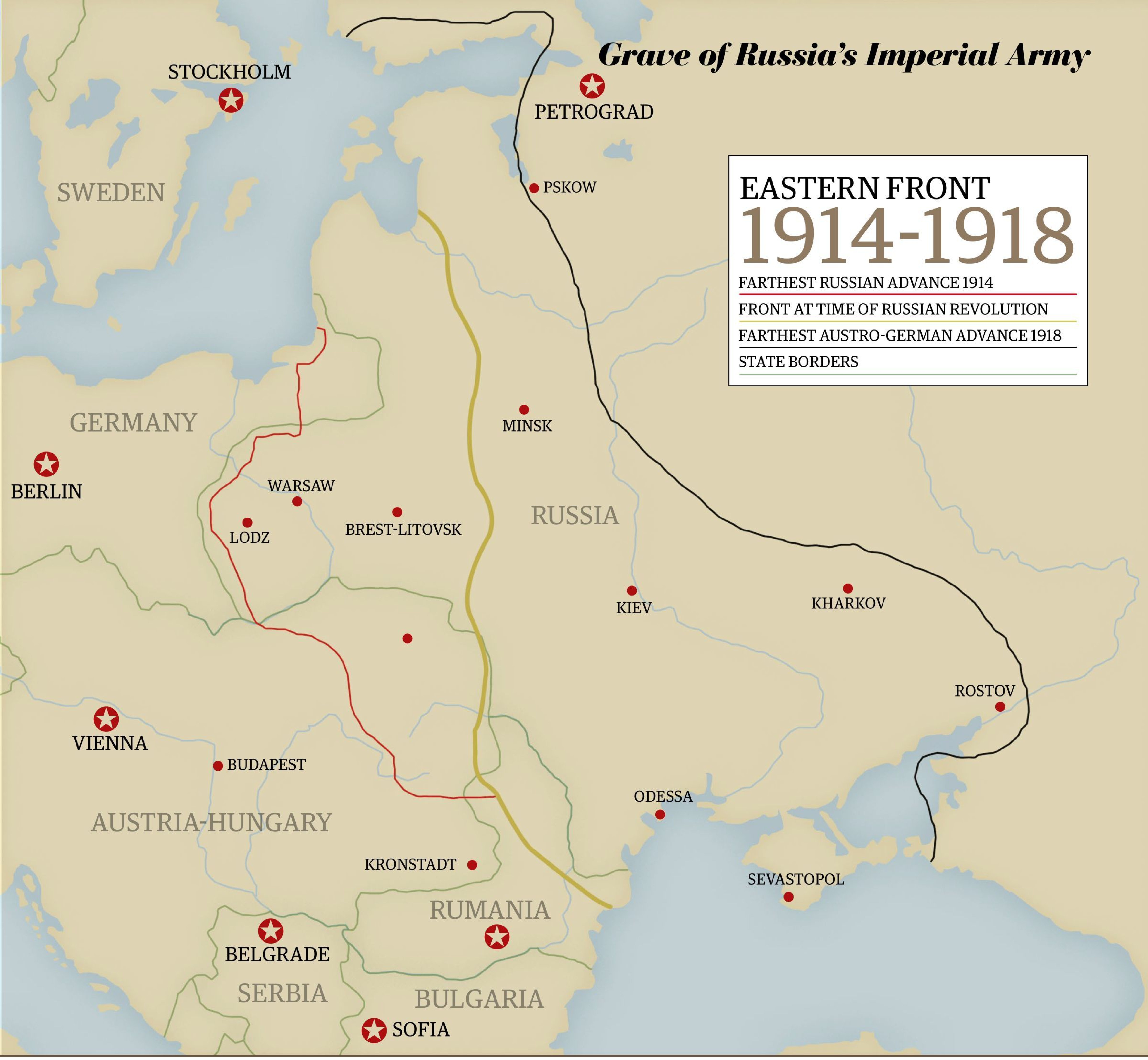
The following month saw an 8th Army counterattack, and in the conventional manner, with an artillery barrage preceding an infantry attack. Latvians and Siberians defended their positions for three days, but Russian attempts to counterattack failed, so the Germans recovered 80 per cent of the ground they had lost, although Machine Gun Hill remained in Russian hands.

With temperatures dropping further to -38°C, the fighting stopped, with both sides literally at a frozen standstill. The Latvian rifle brigades suffered around 8,000 of the Russian losses of some 13,000, the heavy casualties fostering further discontent against Russian generals and the tsar, who was nominally in charge of this debacle. Siberians who had refused to fight were punished, some paying with their lives, others, ironically, carted off to Siberia. Meanwhile, support for the Bolsheviks rose.

The Christmas Battles, fought over the winter of 1916-17, were almost a microcosm of the Eastern Front as a whole, with the two combatants fighting to an exhausted standoff. While they considered what to do next, the strategists increasingly viewed the Eastern Front as a sideshow to what was going on further west. For both sides, however, it remained important. Just the fact it was there, and unresolved, meant the Germans could not transfer large numbers of troops west.

After the initial optimism and enthusiasm for war, marked by an intensity of hatred towards all things German and a love of mother-Russia and its tsar, the

“That glorious autumn of 1914, when everything appeared possible, seemed an awfully long way off now”


EASTERN FRONT
1914-1918
FARTHEST RUSSIAN ADVANCE 1914
FRONT AT TIME OF RUSSIAN REVOLUTION
FARTHEST AUSTRO-GERMAN ADVANCE 1918
STATE BORDERS
STOCKHOLM
PETROGRAD
SWEDEN
PSKOW
GERMANY
MINSK
BERLIN
WARSAW
LODZ
BREST-LITOVSK
RUSSIA
KIEV
KHARKOV
ROSTOV
VIENNA
BUDAPEST
ODESSA
AUSTRIA-HUNGARY
KRONSTADT
SEVASTOPOL
RUMANIA
BELGRADE
SERBIA
BULGARIA
SOFIA

RUSSIA'S FRONT LINE

The Eastern Front was the war everyone expected, one of movement and breakthroughs; the only surprise was that it was not decided quickly

Whereas the Western Front quickly became the war of attrition, with front lines barely shifting in four years, the Eastern Front was more reminiscent of wars past, as armies swept backwards and forwards. Churchill articulated the nub of the problem when he said: "In the east, the land was too big for the armies." No one looked remotely capable of achieving a knockout blow.

In a familiar gambit, Russia traded space and lives for time. In the north, Germans and Russians faced one another across a front that extended south from the Baltic with two noticeable salients, the northernmost German territory (East Prussia), including the 1914 battlefields of Tannenberg and 1st Masurian Lakes. Directly below this was the westernmost part of Russia, jutting out between East Prussia and Galicia like a stubby thumb, with Warsaw at its heart. The theatre that Austria-Hungary and Russia contested in yo-yo fashion, Galicia, followed and below this, Carpathia. The front continued towards the Black Sea, courtesy of Bulgaria and Romania joining the war on opposing sides. The Romanians proved a liability for the Russians as the Bulgarians poured into Dobruja, seizing the Romanian Black Sea port of Constanza and crossing the River Danube into Wallachia.

Turkey's entry into the war gave Russia another wholly different front to contest, betwixt the eastern side of the Black Sea and the Caspian. It was not just the Germans fighting on multiple fronts. Russia, pressured to attack because of the early German successes in the west, ended up attacking Austria-Hungary in southern Poland and Galicia, and then the Germans, firstly in East Prussia and then north from Warsaw. It was inconceivable that the Russian's manpower, heavy but material light, could sustain warfare on all of these different fronts with their obvious shortage of resources such as rifles, artillery, ammunition and clothing.

nation was fast tracking towards Revolution, civil war and the Bolshevik consolidation of power. That glorious autumn of 1914, when everything appeared possible, seemed an awfully long way off now. The loyalist days, when the German embassy in Saint Petersburg was trashed and the German-sounding city was renamed Petrograd, seemed otherworldly. In those days, there had been no defeatism (unlike at the time of the Russo-Japanese War of 1905), just a steady determination to fight and a belief in ultimate victory, with the sidelining of anything that might interfere. Former Prime Minister Count Sergei Witte had been one of the few prescient souls predicting that war would inevitably bring revolution. With the failure of the Christmas Battles, plotters circled like crows around carrion.

The Russians may have been failing militarily, but it would be wrong to view their efforts as simply inept, with callous leaders and generals sending ill-equipped cannon-fodder to its collective death, as has often been depicted. Winston Churchill showed an understanding of the Russian psyche. "Withdrawn into their own country [the Russians] can hold their own," which was particularly true once the Germans went beyond the railway communications, which they relied on for supply and mobility. The Lord Chamberlain, Lord Sandhurst's view that Russia at this time was, "good for nothing, or worse," was quite wide of the mark.

The inspired common-sense of Brusilov is a case in point. His summer 1916 offensive showed tactical nous that is often overlooked. The offensive was over a much larger front than previous Russian attacks, with offensives staged in many places up and down the front to confuse the enemy. This was in stark contrast to previous attacks, which targeted small areas with massed forces. Attempts were made to mask the Russian intentions, artillery was advanced covertly and the duration of the bombardment was deliberately limited (and monitored from the air), as artillery and infantry attempted to co-ordinate. The front line trenches were moved as close as possible to the enemy's before 'zero hour', with infantry having already practiced on mock-ups of the German positions. There was also a strategic reserve, readied to exploit any incursion into enemy positions.

Brusilov deserved to succeed, but was not favoured with the commodity essential to all great generals: luck. He now argued for the tsar's abdication, but also the continuance of the war. Tellingly, it was the Bolsheviks who caught the popular mood by calling for an end to the carnage. Brusilov was worth accommodating though – he would go on to work for the Bolsheviks after the war.

When the February Revolution occurred, it saw the tsar scapegoated, forced to abdicate and replaced by the Provisional Government. After two years of military reverses and food shortages, few can have been surprised at the combustible eruption when police fired on striking workers in Petrograd; few outside the aloof royal family anyway.

The new foreign minister, Pavel Miliukov, was in favour of continuing with the war in the hope of realising national aspirations. The same was true of Alexander Kerensky, Socialist Revolutionary leader, minister of war and future prime minister, who hoped to outflank the Bolsheviks by galvanising the nation into a fresh military effort based on a French-revolutionary style 'nation in arms' and 'democratisation' of Russia's forces. Success on the battlefield would quell dissent at home. The novice leaders of a fledgling Russian democracy would fail, however, on the question of the war's prosecution and the relaxation of military discipline merely opening up the army to Vladimir's Lenin's anti-war propaganda. They would not be the first (or the last) set of politicians to mistakenly assume that wars would be popular and binding. For the tsar, meanwhile, it was now all about staying alive.

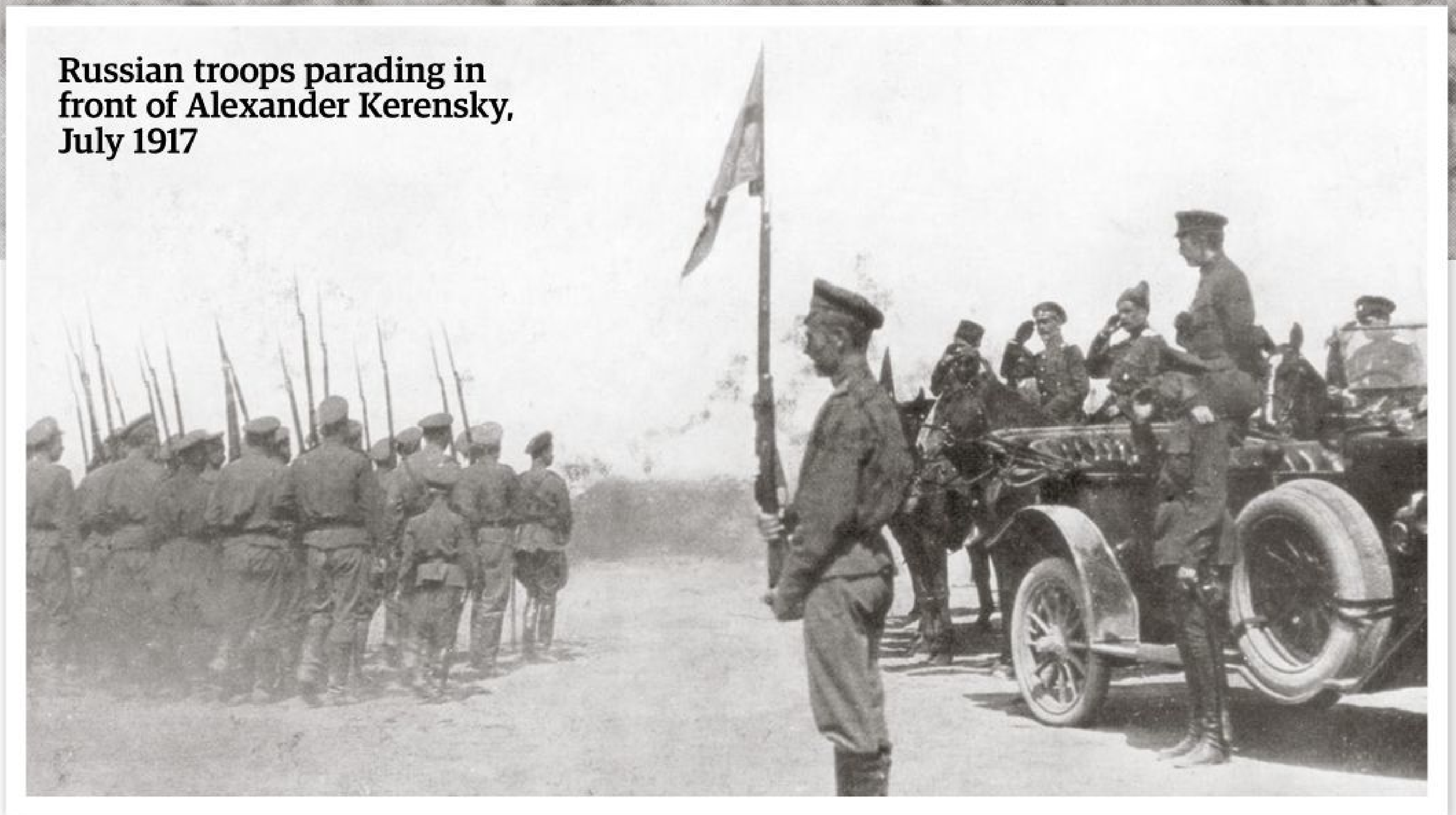
The Provisional Government was already on borrowed time as it competed with the workers' soviets (councils) for hearts and minds. Order Number 1 of the Petrograd Soviet stipulated that control over all arms now vested in soldiers' soviets, elected by the troops. The Provisional Government found itself in the unedifying position of effectively power-sharing with the soviet, which controlled large sections of the army and navy in and around Petrograd. The soviets controlled the railway, postal and telegraph services and gave orders to soldiers and key personnel without the say-so of the government.

> "Brusilov deserved to succeed, but was not favoured with the commodity essential to all great generals: luck"

The prime minister of the Russian Provisional Government, Alexander Kerensky (marked with x), visits Russian troops at the front in September 1917

Wary of incoming artillery fire, Russian soldiers keep watch for enemy movement

In this grizzly scene, a Russian soldier wanders through the frozen dead in the aftermath of battle



Russian troops parading in front of Alexander Kerensky, July 1917

Traditional military discipline was broken and most soldiers were now on strike against any hostile action and the Russian war machine virtually ground to a halt. The German enemy, meanwhile, played fifth columnist, assisting Lenin and his acolytes to return to Russia from exile so they could foment revolution and disrupt, if not end, Russia's commitment to the war. Crucially, Lenin promised an end to the fighting.

Given these circumstances, it is surprising Russia managed one more attack on the Galician Front when Brusilov launched the great July Offensive, or Kerensky Offensive as it has also been dubbed. Commencing on 1 July, this encompassed the ten-day Battle of East Galicia, as the Russians moved towards Lviv in today's western Ukraine.

Early success began with an unusually heavy bombardment, with inroads made against the Austro-Hungarians, but not against the more resilient Germans. Russian losses mounted, causing demoralisation. The broken-reed of the Romanians reared its head again for a Russo-Romanian attack in support of the offensive, which initially broke through at Mărăşti. Soldiers' committees discussed whether officers' orders should be obeyed, mass desertions occurred, and any officers trying to stand in the way were shot. By 16 July, the Russian advance had collapsed.

Led by German General Felix von Bothmer, a combination of Germans and Austrians began pushing the Russians back from 19 July, as their counterattack re-took the likes of Halicz, an important railhead point on the River Dniester in today's western Ukraine, as well as Tarnopol and Czernowitz, both close to the Austro-Hungarian-Russian border in Galicia and Carpathia respectively. There was little Russian resistance as they marched through Galicia and Ukraine. By 20 July, the Russian line had broken and by 23 July they had retreated 240 kilometres. The rapid disintegration proved that Russian army morale no longer existed and that no Russian officer could count on his soldiers. Brusilov would be replaced by Lavr Kornilov, but it mattered not. The last Russian offensive of WWI ended in failure. As Churchill sensed, the war was to be ended, "...by the exhaustion of nations rather than the victories of armies."

Unfortunately for the Russians, the attack was poorly timed, with increasing demands for peace, especially from within the army. Meanwhile, Kerensky was fixed on fulfilling obligations towards his allies, which hardly motivated the Russian soldiery to fight. He needed a victory to restore the soldiers' morale and find popular favour, thereby strengthening his Provisional Government, which faced increasing rancour because of food shortages and rising prices. He gambled on a turn of the die and lost, severely denting the latent democracy's credibility in the process and leaving it fatally weakened as military reverses kick-started the July Days, when soldiers and workers rioted in Petrograd against the Provisional Government.

There was still more fighting between Germans and Russians at the northernmost end of the Eastern Front, where the Christmas Battles had taken place almost a year before. Early in September, The Battle of Riga saw the Germans capture the city in an offensive, which saw them take this end of the front in the final battle between soldiers of the two nations. Russian soldiers defending Kiev, however, refused to fight and fled from their adversaries.

Meanwhile, Kornilov, unhappy with the Provisional Government's plans, marched on Petrograd as the leader of a counter-revolutionary movement aiming to firstly take control of the government, then smash the power of the soviet. In a curious case of 'poacher turned gamekeeper', the Bolsheviks' Red Guard was asked by the government to help defend the city. Kornilov's bid for power, which might have nipped Bolshevism in the bud, was defeated and he was arrested on Kerensky's say-so.

The Bolsheviks' popularity increased further as a result of this crisis and they rapidly orchestrated their seizure of power. Some soldiers supported them and others refused to fight for the government. Within a year, the Russian state had morphed from semi-autocracy, to democracy, to the world's first Communist dictatorship as a result of the October Revolution. Tsar Nicholas II paid for taking his ill-prepared nation to war with his life, assassinated by the Bolsheviks in July 1918 along with the rest of his immediate family.

Russia's World War I experience seems lost today, an historical afterthought, a mere footnote to the stupendous events of the Revolution. Churchill called it right when he termed it 'The Unknown War'. Unknown, rather than overlooked, but perhaps this is changing as historians start to show more interest in WWI's Eastern Front in its own right.

Images: Alamy, Getty, Thinkstock

The Empire Strikes Back

In the spring of 1918, Erich Ludendorff launched what he hoped would be a decisive blow against Britain, winning final victory for Imperial Germany

By early 1918, after years of attritional warfare, the German Army High Command knew very well that its Heimatfront (home front) was on the brink of collapse. The strategy of unrestricted submarine warfare had failed; new British tactics at sea had made sure of that. Since the beginning of the year, American supply and arms deliveries to the Allies had reached a gigantic scale, and hundreds of thousands of US troops were disembarking in the French harbours. In January 1918, though the German field army still numbered 5.1 million men, the only thing that could be realistically hoped for was the possibility to be able to strike a final blow so hard that it would force the Allies to the negotiating table, and then making them accept a cessation of hostilities on terms honourable and advantageous to that of Imperial Germany.

The planning for a great offensive to achieve this aim in the west had already begun in November 1917, and the first thing that needed to be decided upon was location and target. The Germans knew that they lacked the strategic reserves to launch a decisive attack on the French, who by then fielded seven armies. Moreover, most of the terrain occupied by French forces was unsuitable for an offensive, providing the defenders with lots of room and cover to withdraw and reform. From the point of view of tactical skill and flexibility, the French army was considered to be a lot stronger than the British; launching an attack against them seemed to offer more chances of success.

The British were weakened by manpower shortages and spread thinly, and were supported by the inexperienced Portuguese. By getting around the flank of the British and cutting off their retreat, a significant percentage of the BEF could be destroyed and by doing so a 'simple' tactical victory could be turned into a decisive operational one. This would be the time to strike back.

> "I object to the word 'operations'. We'll just blow a hole in the middle. The rest will follow of its own accord"
> **General Erich Ludendorff**

Stormtroopers charging across No Man's Land towards their objectives

Operation Michael

In January 1918, the Germans decided to attack on a 50-mile front, between the River Oise and Arras, in an operation code-named 'Michael'. Three separate armies would participate in the attack: the 2nd, 17th and 18th. The 2nd Army, commanded by General von der Marwitz, had participated in the counterattack at Cambrai in 1917. The 17th Army, under the command of General Otto von Below, was relatively new, but Below was a highly experienced commander who had led 14th Army in the hugely successful Caporetto offensive in 1917.

The 18th Army was commanded by Oskar von Hutier, a veteran of the war on the Eastern Front where he had headed the 2nd Army during the capture of Riga. These three, experienced commanders had one thing in common – each had won spectacular victories in 1917 by incorporating the new and innovative 'stormtroop' and artillery tactics to their strategy.

To make sure they had the best possible troops to their disposal, all men over the age of 35 had been withdrawn from the units to stage the attack, their places filled by younger men from the Eastern Front. In an impressive feat of logistics and organisation, all units had been put through a rigorous programme, in which 56 divisions (about the strength of the entire BEF) were pulled out of the line to be given three weeks of intensive training. The troops practiced skirmish and assault troop tactics and were given time to hone their marksmanship skills on the firing ranges.

Nearly 10,000 artillery pieces and Minenwerfer (mine launchers) were amassed to prepare and support the offensive, about half of the entire German artillery strength in the west, by then the greatest force of artillery ever assembled at one place. Their first task was to support the increased number of trench-raids carried out in the first three months of 1918 and to gas Allied strong-points and artillery positions that were not to be attacked during the offensive. The purpose of the trench raids was to mask preparations and reduce Allied raiding activity – and with it the gathering of intelligence by the enemy.

On the night of 20 March 1918, 3,965 field guns, 2,643 heavy artillery pieces, 3,532 trench mortars, 82 squadrons of aircraft and 74 infantry divisions – a total of nearly 1.4 million German soldiers trained in the latest, state-of-the-art, offensive tactics stood ready for the attack. They would not fall merely upon General Gough's 5th Army, but also its northerly neighbour, the 3rd Army under command of General Byng. The Germans aimed to punch through and crush the salient at Flesquiéres, trapping any Tommy holding the line, after which they would charge west and southwest beyond the old battlefield of the Somme and on to Amiens.

By doing so they would drive a wedge between the British and the French with the hope of destroying either and perhaps even both in the process. The German commanders believed that victory was within reach.

The first written orders were handed to the regiments all along the line: "X-Day, March 21, H-Hour, 9.40 am." "Finally there will be revenge for four years of suffering and teeth-grinding endurance! At last we will be the hammer and no longer the anvil!" One German soldier enthused.

The Stoßtrupps charge

On 21 March 1918, at 4.40 am and without prior warning, nearly 10,000 German artillery pieces and mortars of all calibres opened a barrage of vehemence as yet unseen in the history of warfare. In less than five hours, 3.5 million shells, more than double the amount fired by the British artillery during the seven-day preliminary bombardment two years previous, smashed into the British positions along a 240 square-kilometre patch of the Somme.

When the lethal barrage finally lifted, the German field artillery and trench mortars opened a creeping barrage, a Feuerwalze, timed to move

Leutnant Alfred Splittgerber, 211th Reserve-Infantry-Regiment

"The superiority of the German Army has never been made clearer… Hour by hour I am marking new captured villages on the map. We champ at the bit and can't wait join the attack and to turn into trench fighters again. We hope that our turn will come soon and it won't take Tommy long to draw the necessary conclusions from his retreat in the north and south. An incredible sense of power is suddenly flowing through our veins. What tremendous fellows we are compared to the Tommy weaklings. How fantastic it is that Paris is finally getting it too – not long and our long-range guns will target London itself. Finally the boot is on the other foot, now it is us who have the superiority! Tommy is buckling down! What a joy it is to be a soldier!"

forwards 200 metres every four minutes. On their signal small teams of German assault troops, or Stoßtrupps, rose from their trenches and charged through the smoke and fog towards the British defensive positions. Within minutes they had infiltrated through the first defence lines and raced on to spread chaos and mayhem in the enemy's rear. Sturmblocks – larger battle groups of about 40 men formed on company and sometimes battalion level – followed these units. They were heavily armed with heavy weapons, machine guns, mortars and, as a novelty, modified field artillery pieces, which were dragged into action by the infantry and were under direct orders of the infantry commanders.

The holes these elite troops had blown into the British lines were then quickly exploited by the mass of the German regular infantry following shortly behind them. The stunned defenders had offered little, or no, resistance – the dam of the Allied defences had been breached and the Kaiser's 'field-greys' now poured through the gaps like a torrent of fire and steel. The British were in full retreat. Soon the German troops would reach the British artillery positions and the deadlock of trench warfare would be broken. In the following days, the German Army threw the Allies into disarray and made some spectacular territorial gains. Within days its leading elements had advanced nearly 65 kilometres into enemy territory and came close to capturing Amiens.

The Germans had taken 15 times the amount of ground the Allies had managed to seize from them in the two previous years – they seemed unstoppable. Fearing that the Germans might succeed in splitting the British and French forces, the Allies agreed to co-ordinate their efforts under the command of the French General Ferdinand Foch. Allied resistance stiffened and the Germans finally called off the attack on 5 April. What the Allies, at that point, did not realise was that the scale and speed of the German advance was also its nemesis. The stormtroopers were very exhausted and too much had been asked of the ordinary German soldier.

Logistics and supply had broken down. Dedicated for years to a war of stagnation, it simply could not keep up with a war of movement. The German Army was making spectacular gains, but they were small victories and they were costing them dearly. Nearly 130,000 men had been lost – a number that would be hard to replace.

The depth of the German advance led to major problems, which German High Command had chosen to ignore or had not foreseen. The battleground on which Michael was fought had already been destroyed twice during 1916–17: there were no roads to advance with or to bring forward supplies. Added to that the German Army had wantonly disregarded the production and commissioning of lorries – a problem that was aggravated further by the British Naval Blockade, which had made the import of rubber from overseas almost impossible.

Enter the A7V

The German answer to the British landship rumbled onto the battlefield in 1918

During Operation Michael, 370 British tanks were spread out along the lines, of which about half saw action, most of them breaking down during the retreat. On the German side, the 36th Infantry-Division was supported by the 1st Sturm-Panzer-Kraftwagen-Abteilung (assault tank detachment), which fielded one German A7V tank and five captured British MkIVs. After about two years of development, the A7V was introduced in early 1918. Initially, 100 vehicles were ordered, but only 20 were delivered before the war ended.

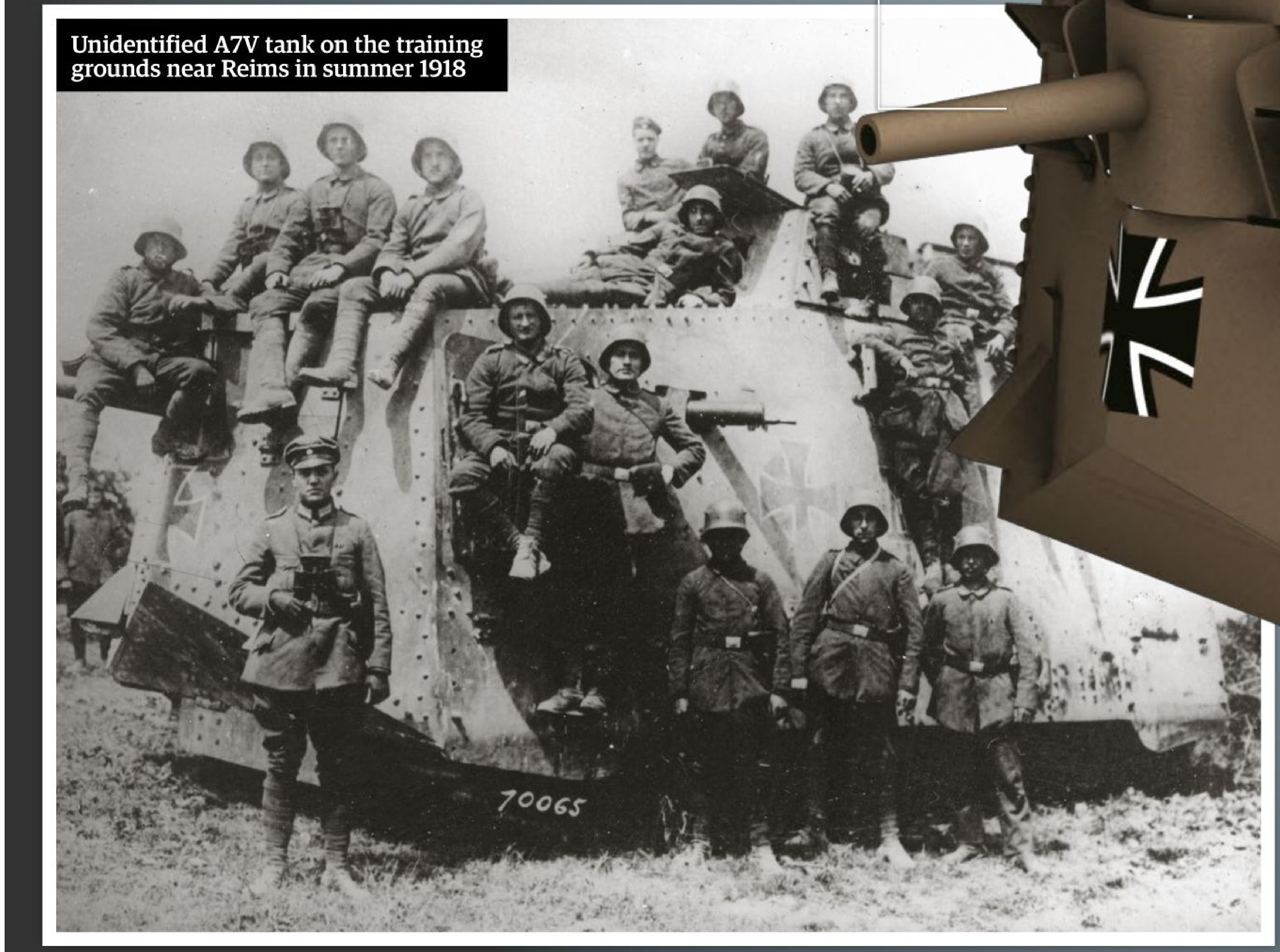
They saw action from March to October 1918 and were the only tanks produced by Germany to be used in operations. The A7V's name was derived from that of its parent organisation, Allgemeines Kriegsdepartement, 7 Abteilung, Verkehrswesen (General War Department, 7th Branch, Transportation). German tank crews were a volunteer force, whose members came from a variety of army combat and logistics formations. Officers, drivers and mechanics mostly originated from motor transport troops, while gunners and loaders came from the artillery and machine-gunners from the infantry. In the German High Command (OHL), the traditional view prevailed that the infantry was the most versatile arm to force a breakthrough, especially the elite Sturmtruppen. Because of this, German doctrine considered the tank to be an auxiliary weapon that could overrun enemy strong points and deposit a contingent of assault infantry.

In its role as an infantry-fighting vehicle, the A7V, with its 16-man crew, could accommodate up to eight additional assault infantrymen. In addition to this, all German tank crews were trained to double as infantry should their vehicles be disabled or circumstances warrant it. With its front-mounted, quick-firing 57mm main gun, twice as many machine guns as the British Mark IV tank (which allowed for 360 degrees of fire), a narrow front profile and an ingenious internal signal-light arrangement, the A7V was able to hold its own during battlefield engagements. Nevertheless, it suffered from serious design flaws. Little ground clearance made cross-country movement a difficult task, and the engine was prone to overheating and mechanical breakdowns were common.

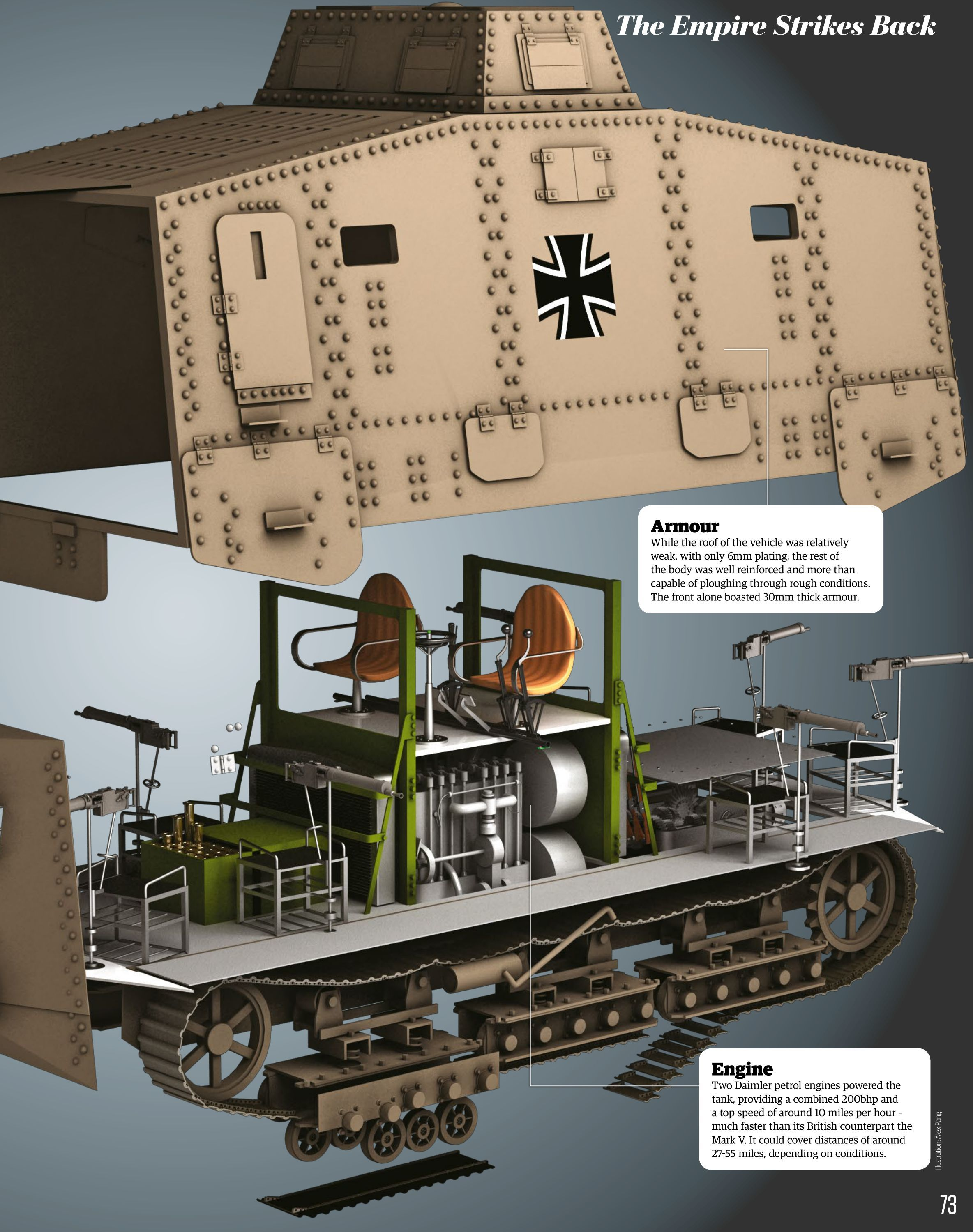
The mass of the armoured punch in the German Army came in the form of captured British tanks. Shortly after the Battle of Cambrai, German troops began to salvage large numbers of them from the battlefield and brought them to Charleroi, where they were repaired, refurbished and re-armed with Belgian 57mm Maxim-Nordenfeldt guns, German MG 08 machine guns and equipped with new sights. As the original British engines made by William Foster & Co were licence built Daimler engines, replacements and parts were delivered and made by Daimler in Berlin. On 28 September 1918, a total of 35 captured tanks were reported to be operational while by the end of 1918 the number had risen to 75. In total around 170 British tanks were captured by the German army to be re-used or cannibalised for parts.

Armament

Mounted at the front of the A7V was the 57mm Maxim-Nordenfelt gun, which was capable of up to 25 rounds per minute. Six additional 7.5mm Maxim guns could also be fitted around the tank, providing 360 degrees of fire.



Unidentified A7V tank on the training grounds near Reims in summer 1918



Armour

While the roof of the vehicle was relatively weak, with only 6mm plating, the rest of the body was well reinforced and more than capable of ploughing through rough conditions. The front alone boasted 30mm thick armour.

Engine

Two Daimler petrol engines powered the tank, providing a combined 200bhp and a top speed of around 10 miles per hour – much faster than its British counterpart the Mark V. It could cover distances of around 27-55 miles, depending on conditions.

Illustration: Alex Pang

Sturmbataillon

Germany's new soldier played a key role in the spring offensive

The first official German stormtroop unit was authorised on 2 March 1915 when the Supreme Command of the field army ordered VIII Corps to form a detachment for the testing of experimental weapons and the development of approximate tactics that could break the deadlock on the Western Front. It was founded by Major Calsow (Calsow Assault Detachment) and later commanded and refined by Hauptmann Willy Rohr (Sturmabteilung Rohr). The methods Rohr developed are the basis of all modern small-unit infantry tactics. By the end of 1916, 30 German divisions had established a Sturmbataillon (battalion of shock troops). Even the navy had formed a detachment.

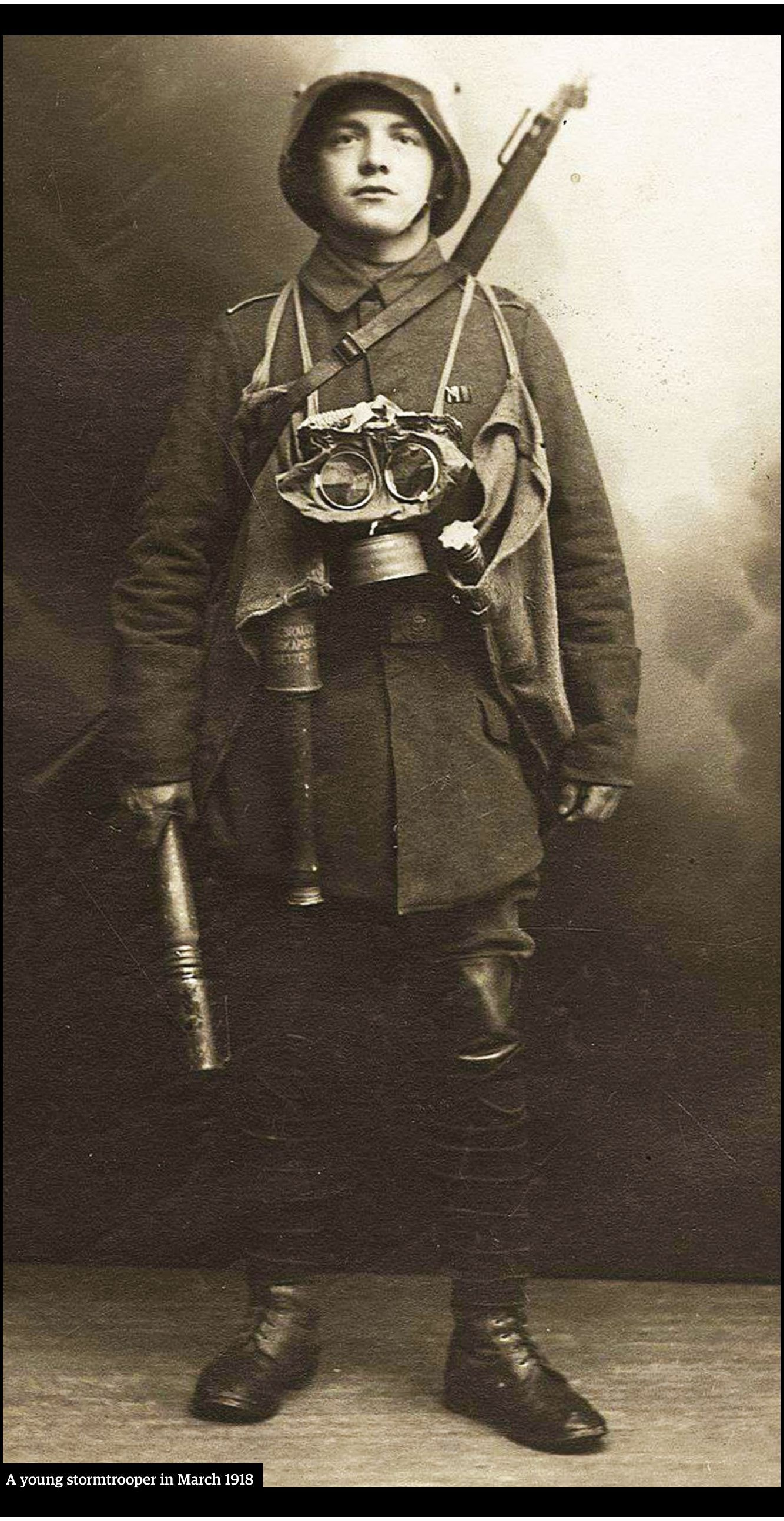
By 1918 a textbook Stormtroop attack would be opened by a short but intense artillery barrage, employing high-explosive and shrapnel shells mixed with a large number of poison gas projectiles. The bombardment was to neutralise the enemy front lines and stun the defenders. Then, following a creeping barrage, small groups of Stoß- or Sturmtruppen would move forward in dispersed order, infiltrating enemy defences at weak points, destroying command and communication centres, artillery positions and avoiding combat whenever it was possible.

The Stoßtrupps were followed by larger, heavily armed Sturmblocks, heavy weapon teams armed with machine-guns, flamethrowers and infantry guns, which would target narrow fronts and strong points in the enemy lines with the aim to accelerate and support the breakthrough of the regular infantry, following closely behind them. Having to act and react in a rapid manner, the assault troopers had to be able to act on their own initiative and to rely on their own physical and mental abilities at all times. To achieve this, only the youngest and the strongest German men were selected to serve in the ranks for the Sturmbataillon.

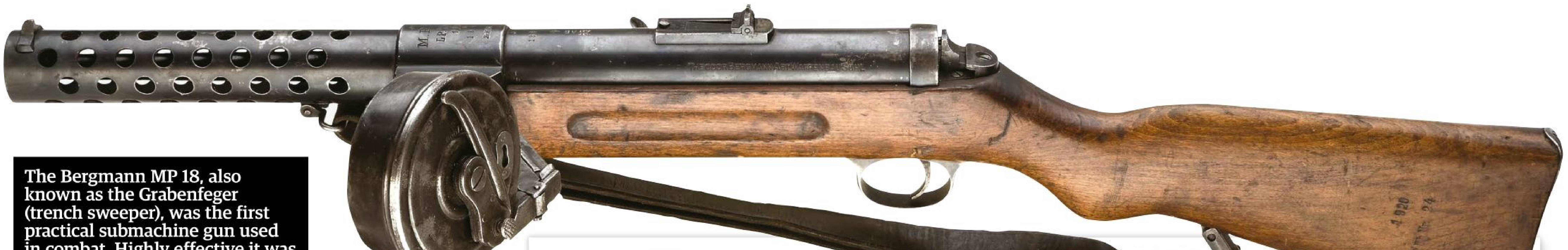
Whereas in 1915 assault detachments had experimented with body armour, steel shields and heavy weaponry, it was soon realised that speed and agility was more important. In combat individual stormtroopers were mostly armed with short carbines, knifes, sharpened spades and lots of hand grenades, carrying modified sandbags full of them into action. NCOs and officers armed themselves with rapid-fire pistols, like the Mauser C96 or the P08 Luger, outfitted with shoulder stocks and high capacity magazines. Only the support teams used light machine guns and other heavy weapons to cover the advancing squads.

Leutnant Ernst Jünger, 73rd Fusilier-Regiment

"The superiority of the German Army has never been made clearer… Hour by hour I am marking new captured villages on the map. We champ at the bit and can't wait join the attack and to turn into trench fighters again. We hope that our turn will come soon and it won't take Tommy long to draw the necessary conclusions from his retreat in the north and south. An incredible sense of power is suddenly flowing through our veins. What tremendous fellows we are compared to the Tommy weaklings. How fantastic it is that Paris is finally getting it too – not long and our long-range guns will target London itself. Finally the boot is on the other foot, now it is us who have the superiority! Tommy is buckling down! What a joy it is to be a soldier!"



A young stormtrooper in March 1918



The Bergmann MP 18, also known as the Grabenfeger (trench sweeper), was the first practical submachine gun used in combat. Highly effective it was first issued to assault units in limited numbers in 1918

It was this lack of motorised transport, overstretched supply lines and a lack of infrastructure that had brought the German attack to a standstill. It is often claimed that the offensive stalled when starved and exhausted German soldiers fell upon British supply dumps and filled their bellies with corned beef and alcohol instead of advancing further against their enemy. While it is indeed true that they were amazed and overawed by the amount and quality of food and supplies available to the foe – and that they filled their pockets and rucksacks to the brim with tinned meats, sugar, cigarettes and brandy – German commanders never lost control over their men.

British prisoners of war during Operation Georgette

Further operations

On 9 April, the Germans attacked again. The assault, known to them as Operation Georgette, came just south of the battlefield of Ypres. Using the same combined-arms tactics, 14 German divisions smashed through the Allied lines and quickly overwhelmed the British and Portuguese opposing them. Again, however, the offensive quickly stalled, this time also due to a more flexible British defence. On 27 May 1918, the Germans, much to the surprise of everyone, launched their final successful offensive, Operation Blücher-Yorck, across the ridge of the Chemin des Dames. 29 German divisions participated in the attack, 13 of them in the first wave. By 29 May, they had taken Soisson and were making towards the Marne. When they arrived there by 5 June only 50 kilometres separated the Germans from the outskirts of Paris. It took the combined efforts of fresh British, French and American troops to slowly grind the attack to a halt.

The Germans had lost about 125,000 men – the French a staggering 167,000, the British 28,703 and the Americans about 11,000. On 6 June, the offensive was called off by Ludendorff. Operation Gneisenau, known to the Germans as the Schlacht an der Matz, ran from 9-13 June in the area of Noyon-Montdidier. This time the French offered stiff resistance from the start and from the 11 June onwards hardly any ground was gained by the Germans. The final German offensive, Operation Marneschutz-Reims failed to achieve any mentionable effect.

When, on 18 July, the Allies launched their great counteroffensive at the Marne, the Allied armies were now bolstered by the newly arrived Americans. The German operations had ruptured the Allied lines on a broad front for the first time in over three years, but these tactical successes failed to cripple the Allied efforts in northern France quickly, and force a favourable armistice. Forced to retreat behind the Aisne, Germany had forever lost the game of numbers, it was now exhausted in the field, as well as at home.

German Stoßtrupp in action

Battles of WWI

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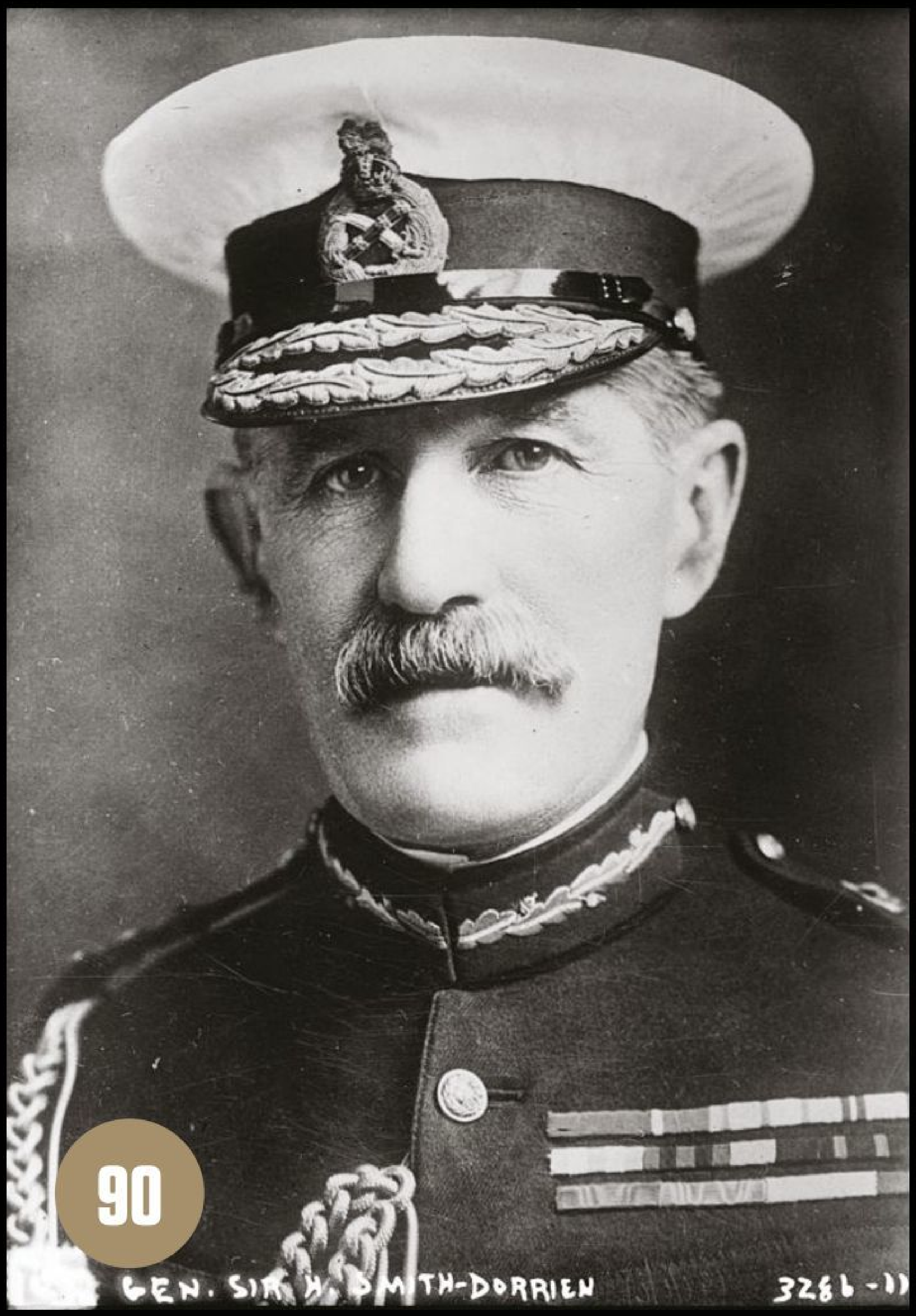
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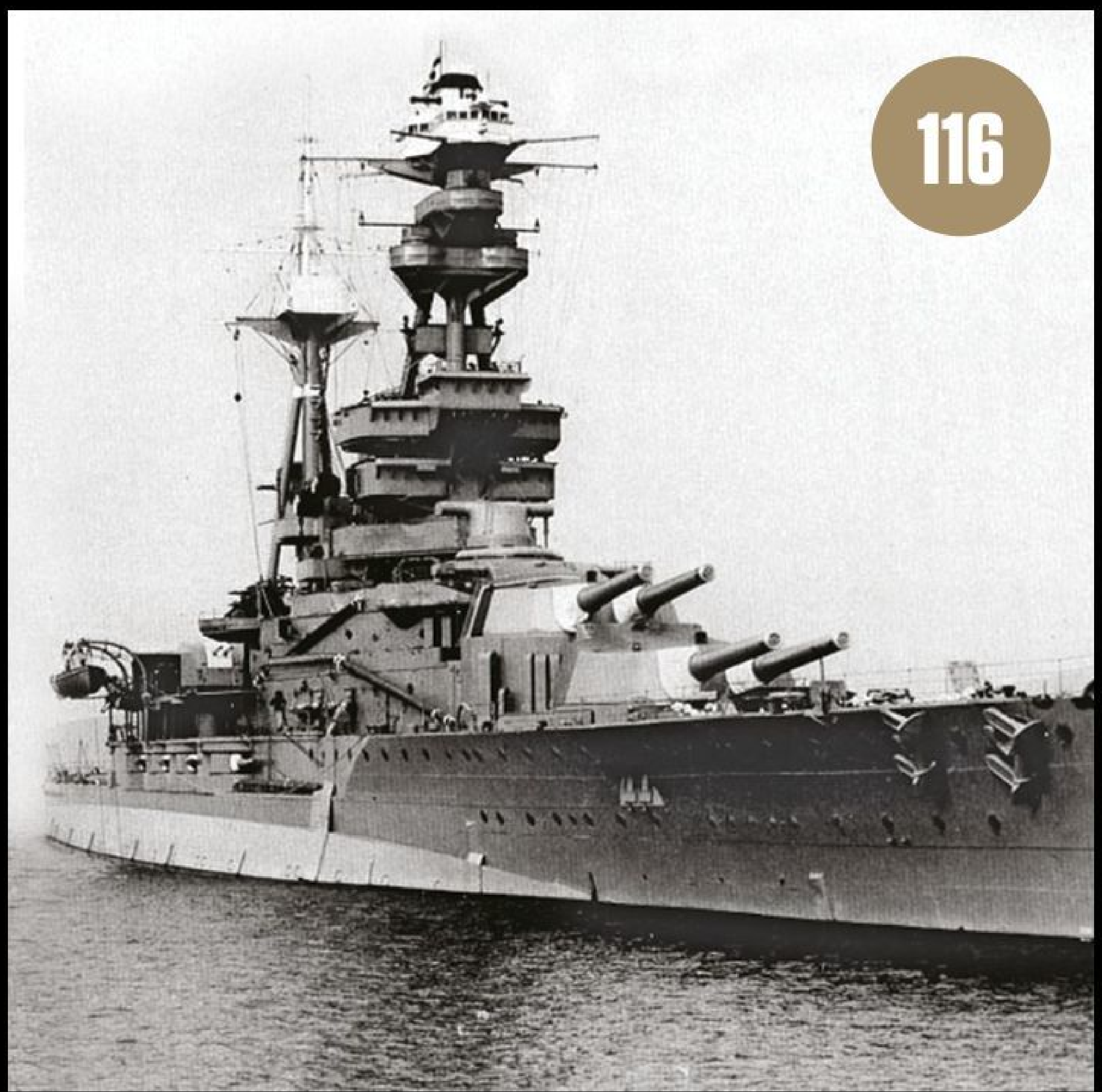

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Gallipoli: A clash of empires

Gallipoli Peninsula, April 1915 – January 1916

Looking out onto the shoreline, Lieutenant-General William Birdwood knew that this would be a risk. Gallipoli, which was once Britain's foolproof plan in the fight against the might of the Central Powers, was fast becoming a disaster and the commander of the Australian Imperial Force (AIF) had been entrusted with turning the tide of the flailing campaign.

The landings began on 25 April 1915 and were designed to take the heat off the British divisions up and down the coast. As the fleet of transports neared the beaches, many were picked off by the Ottoman machine gunners before they even made it to land. For those that did make it out of the boats, they were faced with steep cliffs and a relentless, ferocious enemy led by Colonel Mustafa Kemal, the future Atatürk and 'father' of modern Turkey. Within a short space of time it was clear that this was going to be no easy battle.

For a campaign that was meant to end the stalemate on the Western Front, progression was remarkably slow and trenches were soon constructed. The Australian and New Zealand Army Corps (ANZAC) would lose hundreds of soldiers in the first few days as they dug in to protect a small beachhead and await orders.

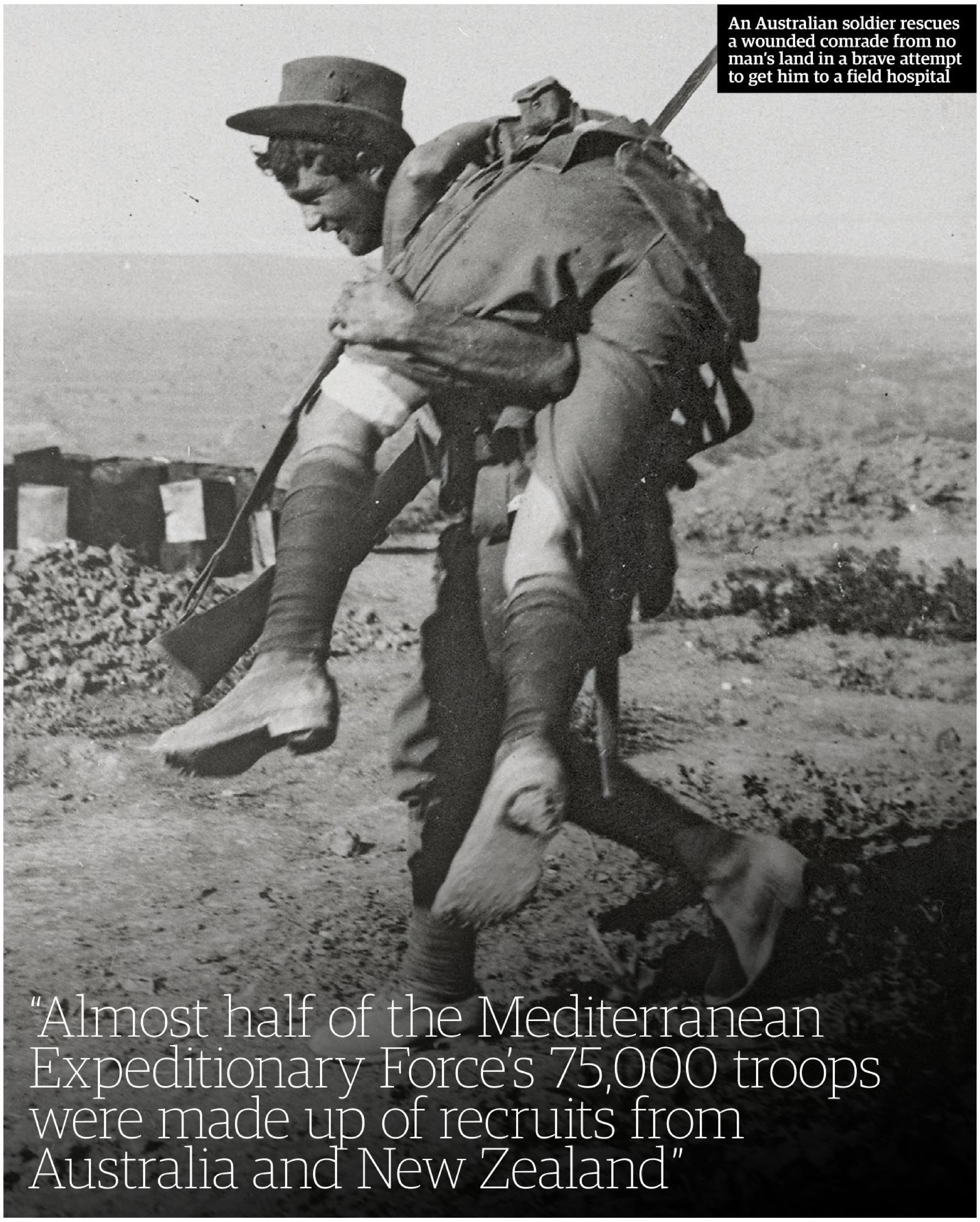
A ready and willing force

Rewind to late 1914 and the picture is a very different one for the ANZAC soldiers. Rather than facing the mud of northern France like the majority of the British Army, including many Australians and New Zealanders, the corps was training on the sands of the Sahara desert. With training and accommodation facilities in short supply back in England, this was deemed the best place to get the ANZAC troops prepared for the heat of battle.

Eagerly awaiting deployment, the war effort was actually very popular in Australasia. Australian Prime Minister Joseph Cook pledged his support to Britain and many rushed to be recruited for the army, as they didn't want to miss out on the adventure. Many 'boy soldiers' even lied about their ages to become part of this high-paid job that will, of course, be over by Christmas. Australia instantly promised 20,000 men to the cause and raised the AIF. New Zealand weren't far behind and the 8,454-strong New Zealand Expeditionary Force (NZEF) left the capital Wellington in October 1914, eager to join the fighting. After their arrival, the NZEF troops were first pressed into action in the Suez Canal, where they helped quash an Ottoman raid on the important waterway. Fast forward to April 1915 and the wheels were now in motion for the ANZAC deployment from Egypt to Turkey. Gallipoli and glory beckoned. Or so they thought.

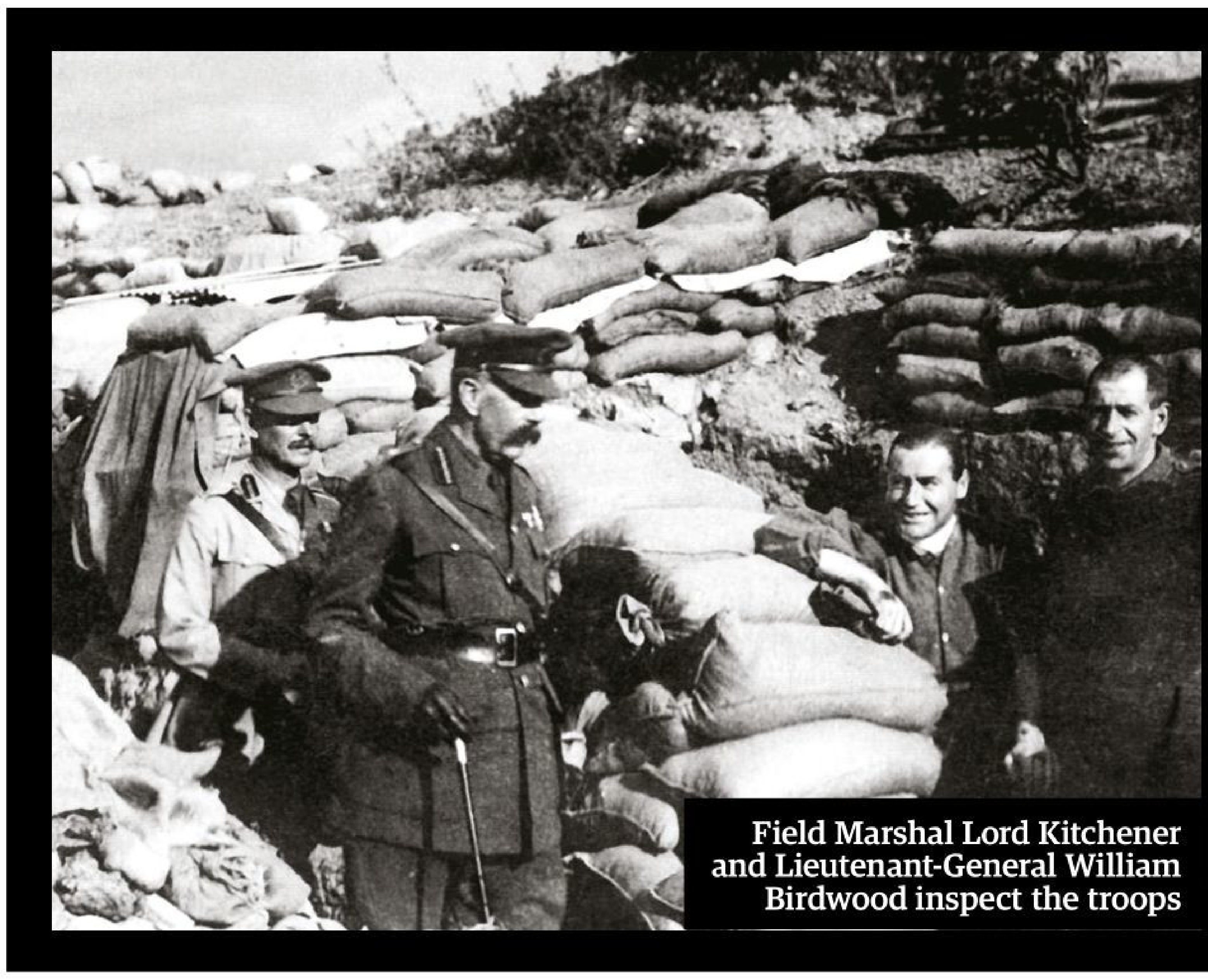
Almost half of the Mediterranean Expeditionary Force's (MEF) 75,000 troops were made up of recruits from both Australia and New Zealand. Saddled with a 40 kilogram pack of equipment and supplies, the ANZAC troops then entered the lion's den of ANZAC Cove on that fateful day in April 1915 and had established a beachhead against the opposing Ottomans.

The peaceful way of life back home seemed far away and a hot summer was coming. As the troops were tormented by the Turkish heat, they now realised this was what war was really like.



An Australian soldier rescues a wounded comrade from no man's land in a brave attempt to get him to a field hospital

"Almost half of the Mediterranean Expeditionary Force's 75,000 troops were made up of recruits from Australia and New Zealand"



Field Marshal Lord Kitchener and Lieutenant-General William Birdwood inspect the troops

Why attack Gallipoli?

The risky operation full of promise that backfired spectacularly for the British Empire

Gallipoli was a failure for the British and is remembered for the frequent blunders made by the Allied hierarchy and the spirited defence of the peninsula by the Ottomans.

The campaign was the brainchild of Winston Churchill - then First Lord of the Admiralty - who desired a second front against the Central Powers. A surge through the 'soft underbelly of Europe' would weaken the German and Austrian lines on the Western and Eastern Fronts. It was believed that this would be a quick-fix for the deadlock in Europe.

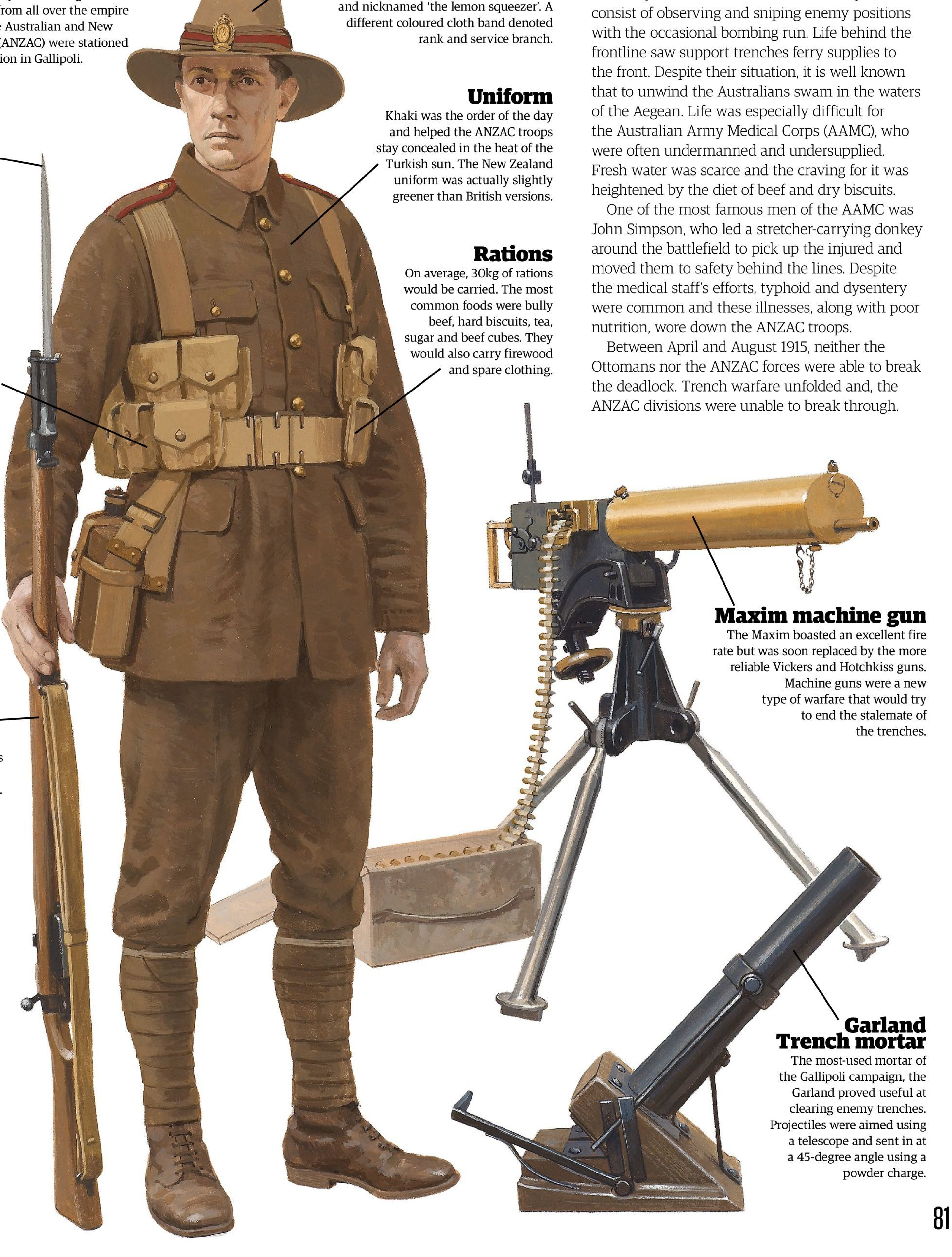
The campaign began on 19 February 1915 with the mighty Royal Navy sailing into the Dardanelles, a strait on the west coast of Turkey, with the aim of bombarding and capturing Constantinople. The poor weather and the tougher-than-expected Turkish fortifications had damaged the Royal Navy considerably and three battleships were sunk. Army assistance, including the ANZAC troops, was called in by April but could only establish small footholds as the Ottomans managed to defend doggedly.

This stalemate would drag on for a number of months as offensives continually proved ineffectual. In December 1915, British command decided that enough was enough and pulled the troops out. It was back to the Western Front for more bloodshed.

ANZAC recruit

Citizen soldiers of the Empire

The British Army incorporated a large contingent of troops from all over the empire to swell its ranks. The Australian and New Zealand Army Corps (ANZAC) were stationed in Egypt ready for action in Gallipoli.



Mounted Rifles Hat
Known as the 'slouch hat', the New Zealand version here was slightly different to its Australian counterpart and nicknamed 'the lemon squeezer'. A different coloured cloth band denoted rank and service branch.

Uniform
Khaki was the order of the day and helped the ANZAC troops stay concealed in the heat of the Turkish sun. The New Zealand uniform was actually slightly greener than British versions.

Rations
On average, 30kg of rations would be carried. The most common foods were bully beef, hard biscuits, tea, sugar and beef cubes. They would also carry firewood and spare clothing.

Bayonet
A bayonet was attached to the end of the rifle for close-quarters combat. The Ottomans carried swords and lances, so this blade could be invaluable when low on ammunition.

Equipment
A standard ANZAC soldier would carry on their Sam Browne belt: a revolver holster, ammo pouch, sword frog, compass, binoculars, map case, shovel haversack and water bottle.

Rifle
The rifle of choice for an ANZAC soldier was the trusty bolt-action Lee Enfield MK I rifle. These were wielded by the main infantry, while officers carried small revolvers.

Maxim machine gun
The Maxim boasted an excellent fire rate but was soon replaced by the more reliable Vickers and Hotchkiss guns. Machine guns were a new type of warfare that would try to end the stalemate of the trenches.

Garland Trench mortar
The most-used mortar of the Gallipoli campaign, the Garland proved useful at clearing enemy trenches. Projectiles were aimed using a telescope and sent in at a 45-degree angle using a powder charge.

The troops dig in

Life on ANZAC Cove was harsh and repetitive. The daily routine on the six-kilometre bay would consist of observing and sniping enemy positions with the occasional bombing run. Life behind the frontline saw support trenches ferry supplies to the front. Despite their situation, it is well known that to unwind the Australians swam in the waters of the Aegean. Life was especially difficult for the Australian Army Medical Corps (AAMC), who were often undermanned and undersupplied. Fresh water was scarce and the craving for it was heightened by the diet of beef and dry biscuits.

One of the most famous men of the AAMC was John Simpson, who led a stretcher-carrying donkey around the battlefield to pick up the injured and moved them to safety behind the lines. Despite the medical staff's efforts, typhoid and dysentery were common and these illnesses, along with poor nutrition, wore down the ANZAC troops.

Between April and August 1915, neither the Ottomans nor the ANZAC forces were able to break the deadlock. Trench warfare unfolded and, the ANZAC divisions were unable to break through.

Ingenuity may save the day

In early May, the New Zealand Infantry Brigade was tasked with a new objective that would hopefully outmanoeuvre the resolute Ottomans. The brigade was taken south to Helles, where British divisions were engaged in combat. Their mission was an assault on the village of Krithia that would join the British forces up with the ANZAC contingent. Progress was initially encouraging but the advance soon turned into a series of battles; 800 men lost their lives.

The ANZAC contribution to the war effort wasn't limited to the frontline. Lurking in the straits was an Australian submarine by the name of AE2, which constantly harassed the Ottoman Navy deep inside its territory. Sinking destroyers, battleships and gunboats, the AE2 eventually ran out of luck on 30 April when it was sunk by an Ottoman torpedo boat after trying to rendezvous with a British submarine. Captain Henry Stoker was left with no option but to scuttle the vessel and the 35-man crew were captured as prisoners of war.

Back on the ANZAC Cove, the remainder of the Australasian corps was struggling against Turkish defences. Traversing the cliffs while dodging machine gun fire was a fruitless exercise, especially as the defenders were being constantly reinforced.

The periscope rifle was one invention that made life easier for the ANZAC troops. Devised by Sergeant William Beach of the 2nd Battalion of the AIF, mirrors were attached to the sight of a rifle allowing soldiers to have a view above the trench without sticking their head in the Ottoman crosshairs. String was also attached so the trigger could be pulled without their hands getting in the line of fire.

There was also the jam tin bomb. Crudely made, this was another excellent improvisation from the ANZACs and was simply an old tin filled with whatever explosives they could get their hands on. All in all it was a plucky invention that saw extended use on the frontline.

On 15 May, the ANZACs lost their chief of general staff when Major General WT Bridges was shot by an Ottoman sniper. This was followed by a huge Ottoman push of 42,000 men on 18 May that was repulsed by the ANZAC forces. Reinforcements in the shape of the Australian 2nd and 3rd Light Horse Brigade arrived but there was still no release from the cove.

Despite the ANZAC's defensive and offensive strategies, there was seemingly no way of ending the stalemate.

Troops would carry up to 40kg of supplies with them when they travelled, including food and spare clothing

The Battle of Lone Pine

6-9 August 1915

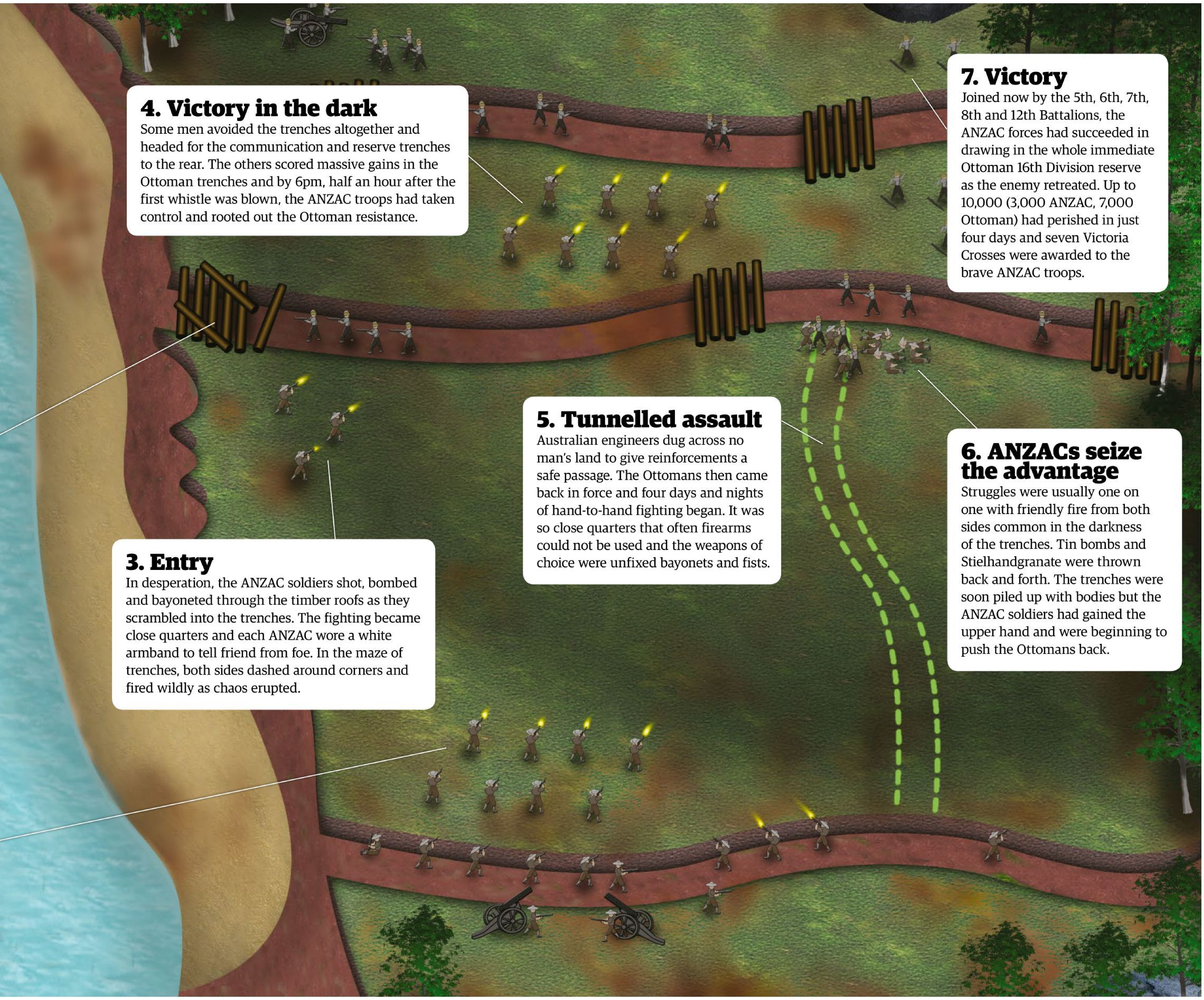
If there was any chance of the August Offensive working, this feint, 100 metres above Anzac Cove, would have to succeed

By August 1915, the ANZAC regiments were already an integral part of the British force. Their mission on this day was to draw the Ottoman armies away from Chunuk Bair to give the August Offensive a chance of succeeding. The ANZAC artillery barrage ceased at 5.30pm. Battle was about to begin.

2. Trench defence
In a flash the ANZAC troops reached the shocked Ottoman encampment. The ANZAC soldiers were then surprised themselves as the trenches were roofed with pine logs. Unable to force their way in and unsure of what to do, many soldiers became sitting ducks and were shot down.

1. Breakout
On the shores of the Aegean Sea, Allied regional Commander in Chief Sir Ian Hamilton established a line and called an end to the artillery barrage. At 5.30pm, 4,600 Australians from the 1st, 2nd, 3rd and 4th Battalions charged the Ottoman positions on Hill 971 with the sun on their backs.

Australian infantry after the battle. Ottoman bodies can be seen strewn across the top of the trench



3. Entry

In desperation, the ANZAC soldiers shot, bombed and bayoneted through the timber roofs as they scrambled into the trenches. The fighting became close quarters and each ANZAC wore a white armband to tell friend from foe. In the maze of trenches, both sides dashed around corners and fired wildly as chaos erupted.

4. Victory in the dark

Some men avoided the trenches altogether and headed for the communication and reserve trenches to the rear. The others scored massive gains in the Ottoman trenches and by 6pm, half an hour after the first whistle was blown, the ANZAC troops had taken control and rooted out the Ottoman resistance.

5. Tunnelled assault

Australian engineers dug across no man's land to give reinforcements a safe passage. The Ottomans then came back in force and four days and nights of hand-to-hand fighting began. It was so close quarters that often firearms could not be used and the weapons of choice were unfixed bayonets and fists.

6. ANZACs seize the advantage

Struggles were usually one on one with friendly fire from both sides common in the darkness of the trenches. Tin bombs and Stielhandgranate were thrown back and forth. The trenches were soon piled up with bodies but the ANZAC soldiers had gained the upper hand and were beginning to push the Ottomans back.

7. Victory

Joined now by the 5th, 6th, 7th, 8th and 12th Battalions, the ANZAC forces had succeeded in drawing in the whole immediate Ottoman 16th Division reserve as the enemy retreated. Up to 10,000 (3,000 ANZAC, 7,000 Ottoman) had perished in just four days and seven Victoria Crosses were awarded to the brave ANZAC troops.

The Enemy in detail

The Gallipoli campaign from the other side of the lines

By the outbreak of the war, the Ottomans were in no fit state for another conflict. After losing land and money in the First and Second Balkan War, they were described as the 'sick man of Europe'. The Ottomans had originally desired an alliance with Britain but this was rebuffed. Impressed with Germany's growing power, they eventually sided with the Central Powers.

The Empire had a long-standing rivalry with Russia and were determined to access Russian seaports. Their assault on Russia's Black Sea ports inadvertently caused the Gallipoli campaign as the Russians appealed for support from their allies.

The straits of Dardanelles were littered with mines that wreaked havoc with the Navy's ships. What the British didn't know, was that the naval bombardment had nearly eradicated all of the Ottoman troops in the area. The withdrawal allowed commander Mustafa Kemal to bring in five corps worth of reinforcements from the Fifth Army to bolster Ottoman strength.

The army put out by the Ottoman Empire at Gallipoli was heavily reliant on assistance from Germany and Austria. They had borrowed the idea of khaki uniforms from them and now wore a kabalak rather than the traditional Turkish fez.

The Empire had very little munitions of their own so both the infantry and cavalry wielded either the Mauser 1893 or Gehwehr 88 rifle, again provided by the Germans. The Ottomans on the peninsula also had swords, pistols and lances as well as Stielhandgrenate, a grenade commonly associated with Germany.

Gallipoli was the most successful Ottoman action of the war as the British underestimated the defences of the strait

Failure after failure

A hastily arranged armistice took place on 24 May so both sides could collect the fallen that now littered the battlefield. The ceasefire lasted from 7.30am to 4.30pm before the fighting resumed for another few months. Something had to give and by August, the British commanders had a new idea – the August Offensive.

One of the first of these new engagements was the Battle of the Nek on 7 August 1915. The Australian 3rd Horse Brigade was entrusted with an advance on a thin strip of land known as the Nek. Here, there were a number of Turkish trenches that, if taken, would represent a significant foothold for the British. The attack began at 4.30am with support from an offshore destroyer that provided an artillery barrage.

Unfortunately, in one of the miscalculations, the bombardment was unleashed seven minutes early and the Ottomans had time to shelter and return to their positions ready for the cavalry charge.

In a scene reminiscent of the Charge of the Light Brigade, the Ottoman machine gun fire cut down the cavalry and infantry. More than 300 died in the massacre with next to no territorial gain. While the Australians were led to the slaughter at Nek, the New Zealanders were facing problems of their own at Chunuk Bair, a 13-day struggle to the summit of the Sari Bair ridge.

After fierce resistance on the ascent, the New Zealanders arrived to find the peak deserted and the Wellington and Auckland Battalions were forced to hold off a renewed Ottoman advance on the top at dawn on 8 August. Under increasing pressure from artillery strikes and machine gun fire, the stubborn New Zealanders were eventually bailed out by incoming British troops, who were soon taken out by a mass Ottoman counterattack.

Later in the month, the Battle of Hill 60 on 21 August proved to be just as disastrous for both Australian and New Zealand soldiers. After the failures at Nek and Chunuk Bair, this battle represented the last throw of the dice for the weary divisions. The ANZAC troops managed to get among the maze of Ottoman trenches but were unable to force them out of their positions completely. With a distinct lack of ammunition and minimal artillery support, the attack soon lost momentum. The exhausted British lost up to 2,500 men as the Ottomans once again proved too strong.

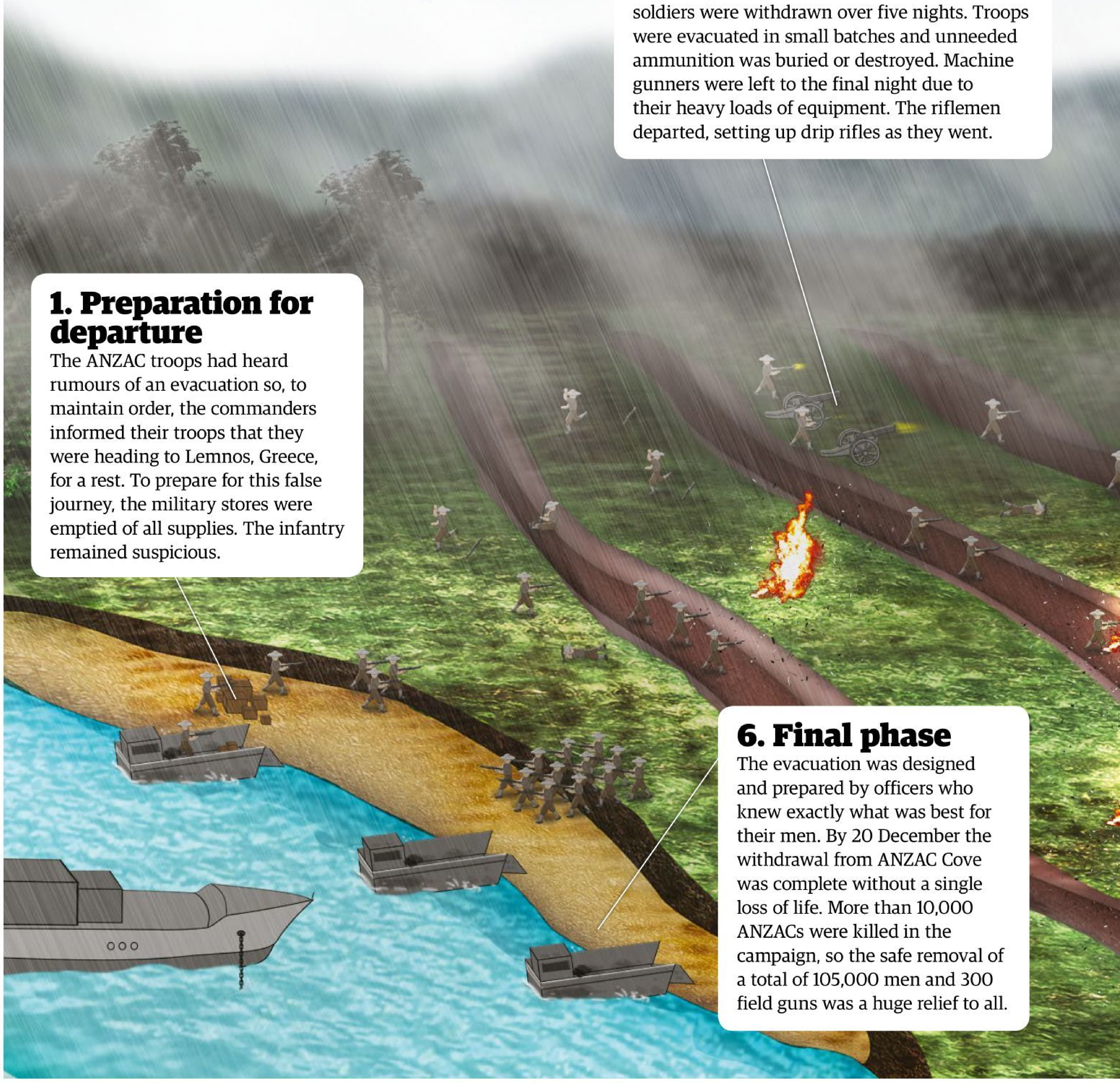
The main British divisions were struggling themselves. Suvla Bay was a lightly defended enclave that was seen by the British as an ideal way to break the deadlock and hit the Ottomans where it hurt. Some 63,000 allied troops swarmed into the area but could not link up with ANZAC Cove before they were repulsed.

This was the final straw for Field Lord Marshal Kitchener who, after a visit, declared that evacuation was the only course of action for this costly campaign. Long-standing Commander in Chief Sir Ian Hamilton was replaced by Charles Munro as the evacuation got under way.

The evacuation from the cove

The bloodshed had gone on for too long and by November 1915, it was time to withdraw from ANZAC Cove

After the loss of Hill 60 on 29 August 1915, commanders decided that withdrawal was now the only option available to the British. The idea of reinforcement and navy barrage was toyed with but on 13 November Lord Kitchener observed ANZAC Cove and declared an imminent evacuation. The ANZAC role in Gallipoli was over.



4. Reducing the garrison

Beginning on 15 December, 36,000 ANZAC soldiers were withdrawn over five nights. Troops were evacuated in small batches and unneeded ammunition was buried or destroyed. Machine gunners were left to the final night due to their heavy loads of equipment. The riflemen departed, setting up drip rifles as they went.

1. Preparation for departure

The ANZAC troops had heard rumours of an evacuation so, to maintain order, the commanders informed their troops that they were heading to Lemnos, Greece, for a rest. To prepare for this false journey, the military stores were emptied of all supplies. The infantry remained suspicious.

6. Final phase

The evacuation was designed and prepared by officers who knew exactly what was best for their men. By 20 December the withdrawal from ANZAC Cove was complete without a single loss of life. More than 10,000 ANZACs were killed in the campaign, so the safe removal of a total of 105,000 men and 300 field guns was a huge relief to all.

Helles Cove pictured just before the evacuation of the final troops

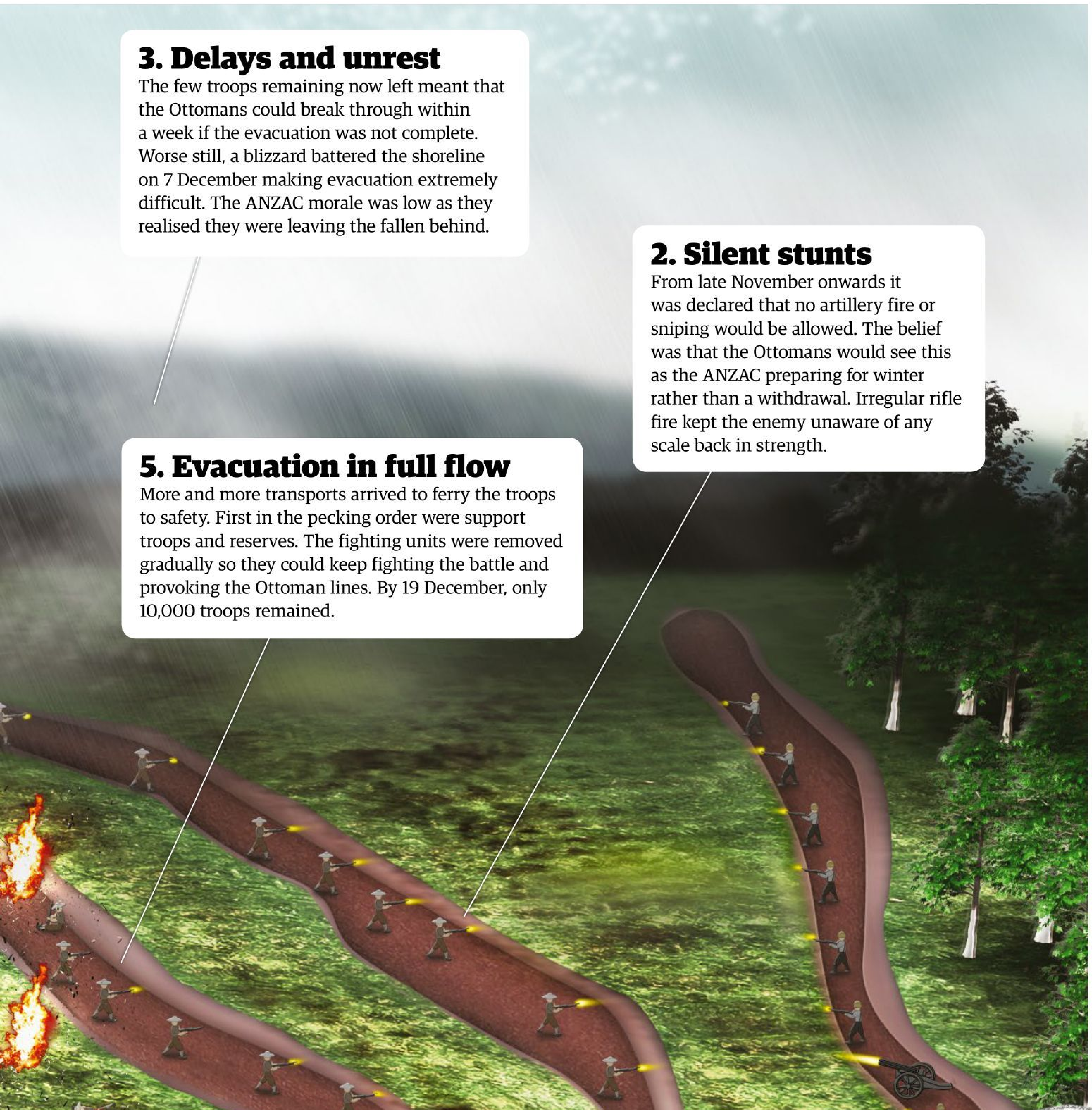
The night of the evacuation

Fleeing under the cover of darkness, the British used a new rifle to aid their escape

Churchill was convinced that the Gallipoli Campaign was a good idea, but even he had to give up the ghost as the new year dawned. After approximately 200,000 Allied casualties, the decision was taken to cut losses and evacuate in December 1915. ANZAC Cove was the first to be abandoned and 36,000 troops were cleared within five nights with no loss of life. The next areas to be evacuated were Suvla Bay and Helles Bay. The last troops stepped on to the transports on 9 January 1916. Gallipoli was over and 142,000 men had been rescued.

William Birdwood was in charge of the evacuations and they were undoubtedly the biggest success of the whole campaign. The forces were moved under the cover of darkness as they kept up their attacks during the day to not draw attention to the imminent withdrawal.

It was so sneaky that the Ottomans shelled empty trenches after the British forces were long gone. The successful evacuation is partly down to an innovative tactic used by the British – the drip rifle. Using a simple system of water cans and string, rifles were set up to fire automatically at the Ottomans while the remaining troops scampered to safety.



3. Delays and unrest

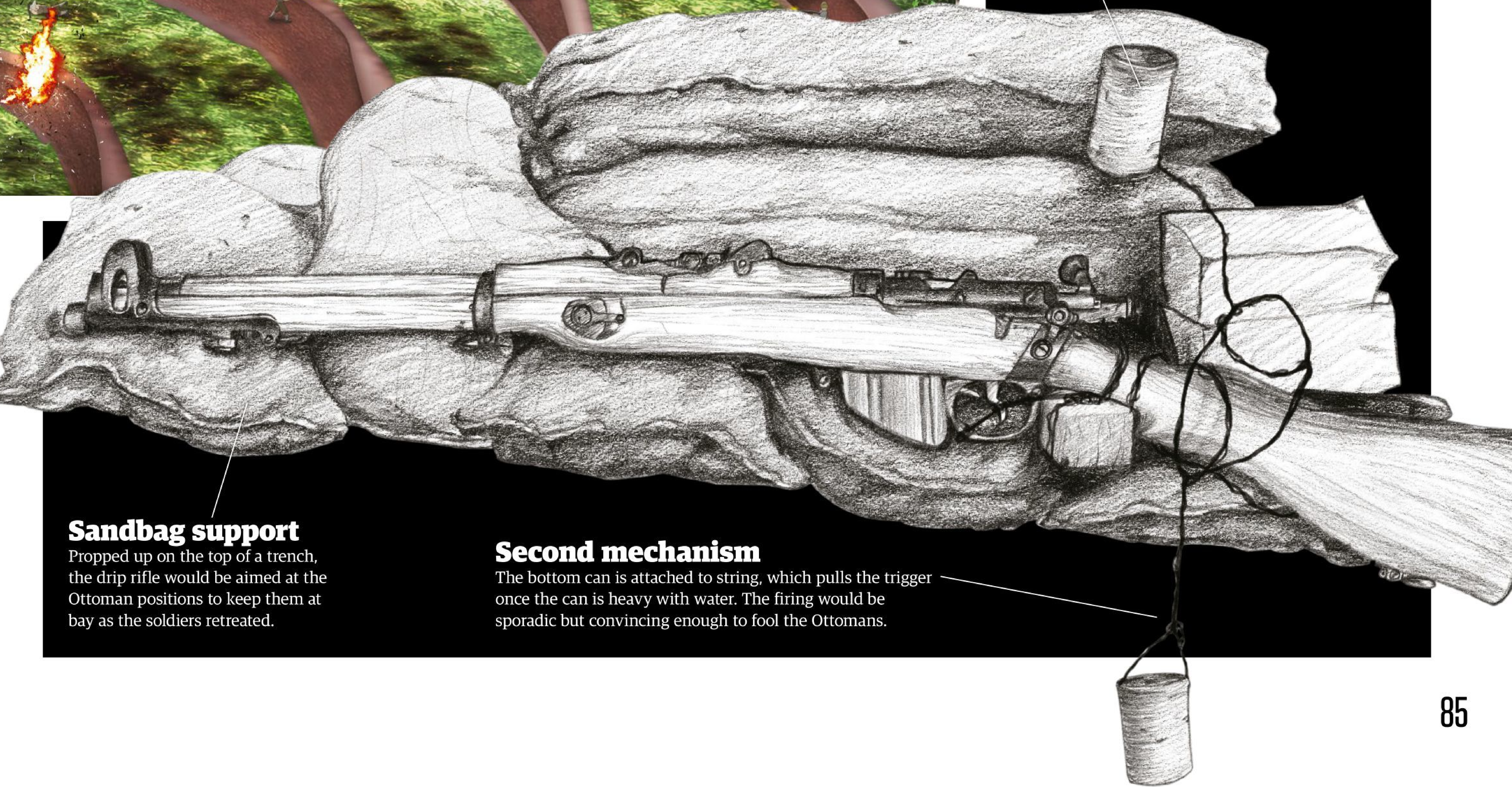
The few troops remaining now left meant that the Ottomans could break through within a week if the evacuation was not complete. Worse still, a blizzard battered the shoreline on 7 December making evacuation extremely difficult. The ANZAC morale was low as they realised they were leaving the fallen behind.

2. Silent stunts

From late November onwards it was declared that no artillery fire or sniping would be allowed. The belief was that the Ottomans would see this as the ANZAC preparing for winter rather than a withdrawal. Irregular rifle fire kept the enemy unaware of any scale back in strength.

5. Evacuation in full flow

More and more transports arrived to ferry the troops to safety. First in the pecking order were support troops and reserves. The fighting units were removed gradually so they could keep fighting the battle and provoking the Ottoman lines. By 19 December, only 10,000 troops remained.



First mechanism

Invented by Australian Lance Corporal William Scurry, the top can is filled with water, which drips into the lower can after the fleeing soldier punches a hole in the bottom.

Sandbag support

Propped up on the top of a trench, the drip rifle would be aimed at the Ottoman positions to keep them at bay as the soldiers retreated.

Second mechanism

The bottom can is attached to string, which pulls the trigger once the can is heavy with water. The firing would be sporadic but convincing enough to fool the Ottomans.

"As we captured Lone Pine we felt like wild beasts and as fast as our men went down another would take his place but soon the wounded were piled up three or four deep and, the moans of our poor fellows and also the Turks we tramped on was awful."

Private Tom Billings

A successful evacuation

The ANZAC contingent had now been stationed at the cove for a number of months and it wasn't soon until winter would arrive in Gallipoli. Despite being exhausted, the decision to evacuate was kept from the ANZAC troops as long as possible. These troops had come halfway around the world and even though many were diseased and sick, the decision to retreat when they had made little to no territorial gain would crush morale.

The evacuation was covered up by a false restocking mission to Lemnos but whispers were frequent and by November the game was up. This was to be no quick withdrawal though. The evacuation was to be done in stages and in the most discreet way so the Ottomans did not suspect a thing.

By day the ANZACS would keep up their attacks as usual but by night, a careful retreat was devised. Small numbers would depart as the rest of the division fired sporadically to give the illusion the troops were still fighting. The entire evacuation took five days and was so well disguised that the Ottoman artillery bombarded the empty trenches for days afterwards.

The ANZAC forces lost 8,709 Australians and 2,701 New Zealanders at Gallipoli, with many more, perhaps up to 20,000, wounded. The campaign was a complete failure but could have been so much worse for the British if it wasn't for the bravery and tenacity of these men from the other side of the globe. In the grand scheme of things, Gallipoli was not a defining campaign, with the events on the Western and Eastern Fronts being much more significant in the fall of the Central Powers of the war.

After the evacuation, the ANZACs went on to serve with distinction on the Western Front and many other theatres of war in World War I. The events of 1915 still live long in the memory of Australians, New Zealanders and also Turks.

The success of the campaign under future president Mustafa Kemal kick started a Turkish revival that gave a renewed sense of identity and helped aid the fall of the Ottoman Empire in the Turkish War of Independence. Back Down Under, remembering the sacrifice is an annual tradition and for two young countries, the experience bound them together.

A group of Australian troops bravely charging head on at an Ottoman trench

"They earned a reputation as tough fighters"

We speak to Dr Damien Fenton, honourary research fellow at Massey University in Wellington, New Zealand, about the ANZAC campaign

What was the role of the ANZACs in the Gallipoli campaign?

The original role of the 30,000-strong ANZAC was to carry out a landing near Gaba Tepe and support the British landings at Cape Helles by advancing inland to capture the Sari Bair Range and Maltepe, thereby cutting the Ottoman lines of communication with their troops at Helles. Instead they landed at the wrong place – Ari Burnu (ANZAC Cove) – and ended up defending their six kilometre squared beach head for the next three months while the British and French concentrated on trying to break out of Cape Helles.

In late July, the MEF's attention switched to the ANZAC enclave, which became the focal point of the Sari Bair Offensive in August. The ANZACs played a leading role in this ultimately doomed offensive and suffered accordingly – ANZAC casualties for between 6 and 10 August amount to 12,000. After more heavy fighting in late August to consolidate the link-up between ANZAC and Suvla, the ANZACs settled back into the daily grind of trench warfare to defend their now greatly expanded perimeter until the final evacuation in December.

What technology, weapons and methods of warfare were used by the ANZACs?

The volunteer citizen-soldiers of the AIF and NZEF who served in Gallipoli in 1915 had been organised, trained and equipped on the basis of pre-war British Army regulations, albeit with a few local variations in uniform and equipment. Infantry brigades predominated but both expeditionary forces contained a high proportion of mounted infantry regiments, Australian Light Horse and New Zealand Mounted Rifles accordingly.

The 25 April landing was an all-infantry affair with the mounted regiments arriving at ANZAC as reinforcements on 12 May, without their horses. The infantry and mounted troops from both Dominions soon earned a reputation as tough, aggressive fighters who quickly adapted to the conditions of trench warfare. Their field artillery batteries were equipped with modern 18-pounders and 4.5-inch howitzers, which, to the surprise of the ANZACs, made them better equipped than many of the British Territorial or New Army artillery batteries sent out to Gallipoli.

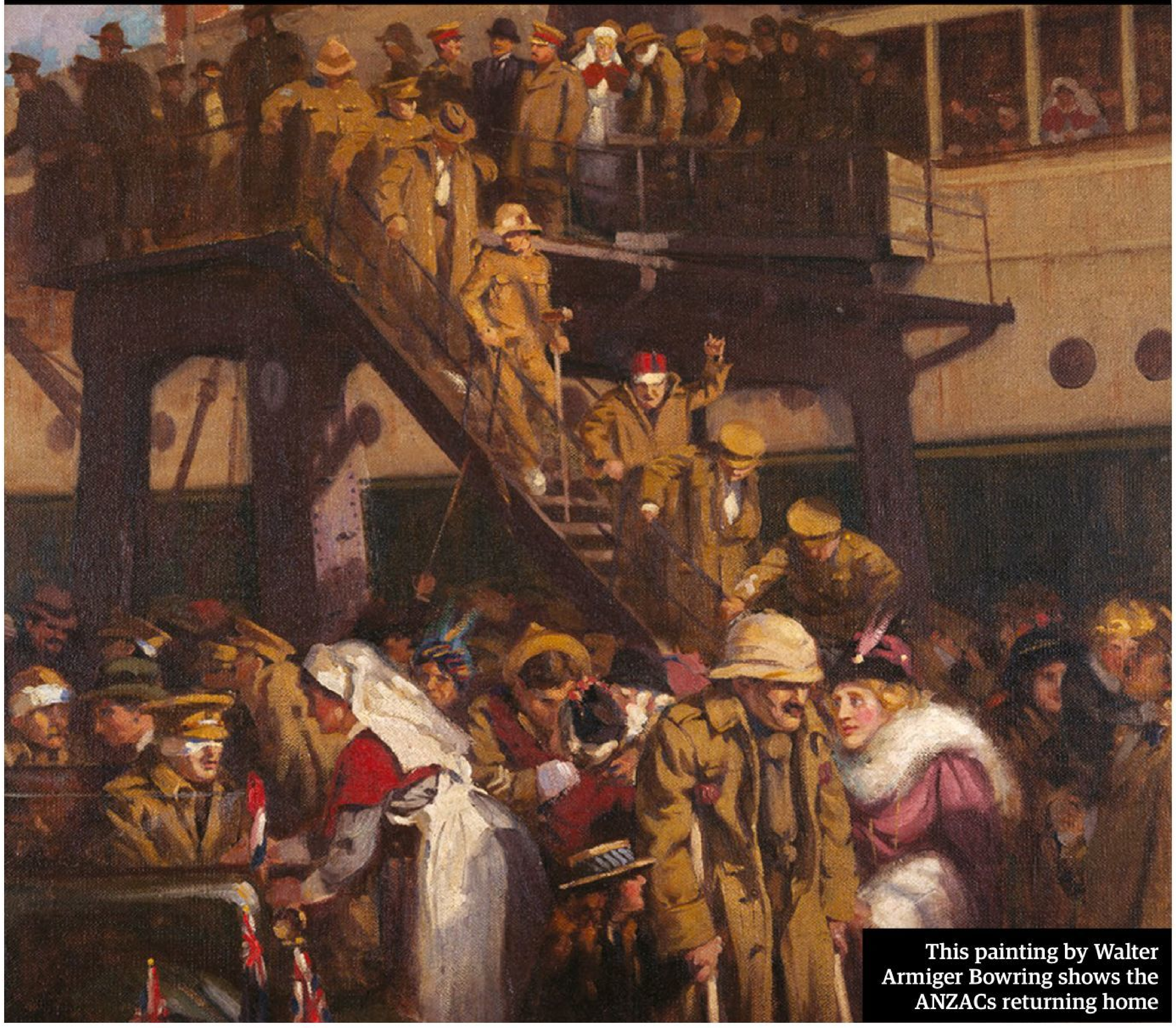
How did the Australian units differ from the New Zealand units?

It was often hard for outsiders to distinguish the soldiers from the two Dominions, much to the annoyance of the New Zealanders, who usually found themselves mistaken for Australians. In 1914-15, the famous 'Aussie' slouch hat was actually also standard kit for most New Zealand infantry and mounted units. This changed when the NZEF adopted the 'lemon squeezer' felt hat as a deliberate effort to differentiate themselves from the AIF. In demeanour, the New Zealanders were often noted as being less boisterous than the Australians and more willing to take prisoners but in terms of fighting ability, there was nothing between them.

The ANZAC legacy

The ANZAC's heroism and bravery at Gallipoli lives on to this day

A celebration of the wartime spirit shown by soldiers from Australia and New Zealand. The first ANZAC Day was in 1916 and has been going ever since, with marches and services throughout the two countries. The day begins at dawn on 25 April, the date that ANZAC troops first landed on the peninsula. Rosemary is traditionally worn, as it was commonly found on the battlefields at Gallipoli. There is also a tradition of making the ANZAC biscuit to remember the rations sent from home to the soldiers on the frontline. A special year for the remembrance was 1990, when veterans went back to the site of the battles to commemorate their 75th anniversary.



This painting by Walter Armiger Bowring shows the ANZACs returning home

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Gas victim

The chlorine gas used by the Germans at Ypres was denser than the atmosphere, meaning it quickly flooded the British trenches. The casualty rate inflicted by the gas was high, with many soldiers suffering painful deaths.

Not pressing the advantage

Despite successfully causing large amounts of damage to the Allied forces, the Germans were slow to press the advantage, so as a result didn't gain as much ground as they could have done.

War dead

Thanks in large part to the use of gas, the Second Battle of Ypres saw a high amount of casualties on both sides. The Allies saw over 70,000 lost, while the German total was around half that at 35,000.

Holding the line
Despite the devastating assaults levelled upon them by the German forces, the Allied troops managed to stay strong for the most part, staving off defeat, but losing some of the tactical advantage of high ground.

The Second Battle of Ypres

Ypres, Belgium, 21 April - 25 May 1915

When recalling some of the hugely destructive trench-warfare battles of World War I, Ypres is one of the first names that comes to mind. While the First Battle of 1914 stands out due to the catastrophic death toll, the Second Battle retains historical significance for a different – but equally sinister – reason: it marked the first use of poison gas in battle on the Western Front.

The first instance of its use happened at the start of the Battle of Gravenstafel – the first of six smaller battles that collectively form the larger Second Battle of Ypres. After first shelling the French territorial and Algerian/Moroccan forces with howitzer fire, the German troops unleashed their 5,700 canisters' worth of chlorine gas, carried toward the Allies by the prevailing winds.

Its impact was instant and catastrophic. Of the 10,000 troops, around 6,000 were dead within minutes. When combined with water, chlorine becomes acidic – in the process destroying the eyes and lungs. The surviving French troops scattered, leaving a seven-kilometre (4.3-mile)-wide gap for the Germans to advance through.

However, the German forces became victims of their own success. Not anticipating the effectiveness of gas, much of their reserves had been transferred west to the Russian front. Coupled with their weariness of possible Allied traps and the adverse effects of the still-lingering gas, they advanced slowly. Their reticence gave the Allied troops time to counter-attack, successfully driving the German troops back, but not without casualties.

Having seen the brutal efficiency of gas as a weapon, the Germans used it again – this time on 24 April at the Battle of St Julien against Canadian forces. Again, the losses were heavy, although despite being pushed back, the Canadian troops managed to hold on, having developed the method of holding urine-soaked rags to their faces in order to counteract the effects of the gas. British reinforcements arrived on 3 May, by which point the Allies had suffered around 1,000 fatalities.

After the Allied troops fell back closer to the town of Ypres – recognising that only a large-scale assault would push the Germans back, something they didn't at that time have the manpower to commit – the battle recommenced on 8 May. Although the Germans were able to occupy Frezenberg Ridge and continued to inflict devastating assaults on the Allied forces, they managed to hold the line.

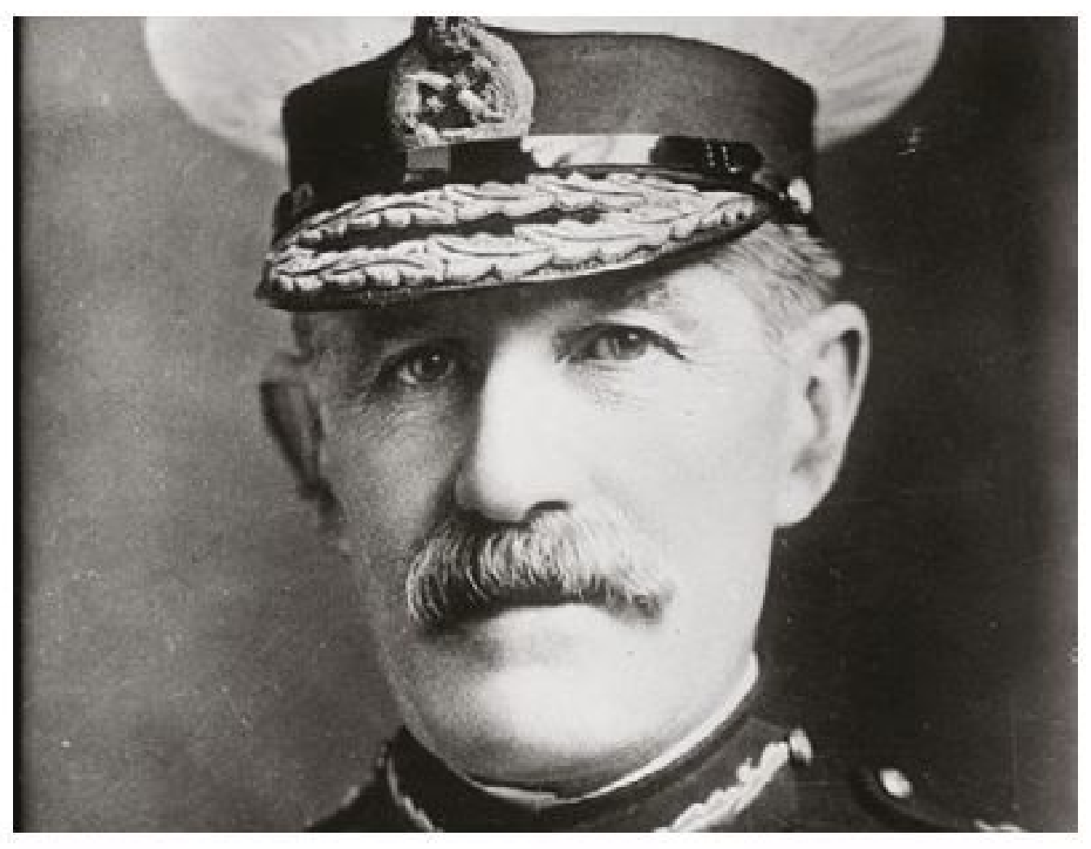
A further assault at Bellewaarde on 24 May by the German forces (again by poison gas) forced the Allied troops to withdraw and retreat by about a kilometre (0.6 miles). Prevented from making further advances due to a lack of personnel and supplies, they instead resorted to bombing the town – by the battle's end, Ypres was little more than a pile of rubble.

The death tolls make for particularly dire reading: the combined Allied forces experienced around 70,000 casualties; the Germans 35,000. Furthermore, the effectiveness of gas as a weapon had been clearly and brutally demonstrated. Although its use was widely condemned, the British adopted its use, putting it into effect at Loos later that year. Thus, the after-effects of one of the bloodiest battles of the war would continue to linger on.

Allied Army

TROOPS EIGHT DIVISIONS

CASUALTIES 70,000



GENERAL SIR HORACE SMITH-DORRIEN

LEADER

On 6 May, Smith-Dorrien was relieved from duty by General French, replaced with Herbert Plumer.

Strengths Very organised and pragmatic decision-maker.

Weakness Poor relationship with commanding officer led to his ultimate dismissal.

ALLIED SOLDIER

KEY UNIT

The Allied Army comprised British, French, Canadian and African forces, with soldiers from other Commonwealth countries.

Strengths Included the well-trained British Expeditionary Force.

Weakness Defending a vulnerable position; couldn't defend against gas.

HOWITZER

KEY WEAPON

Faced with gas attacks and long-range artillery assaults, the British replied with fire of their own.

Strengths Long range and potentially devastating.

Weakness Found themselves in a tactically inferior position, which reduced effectiveness.

01 Unsuccessful gas attack

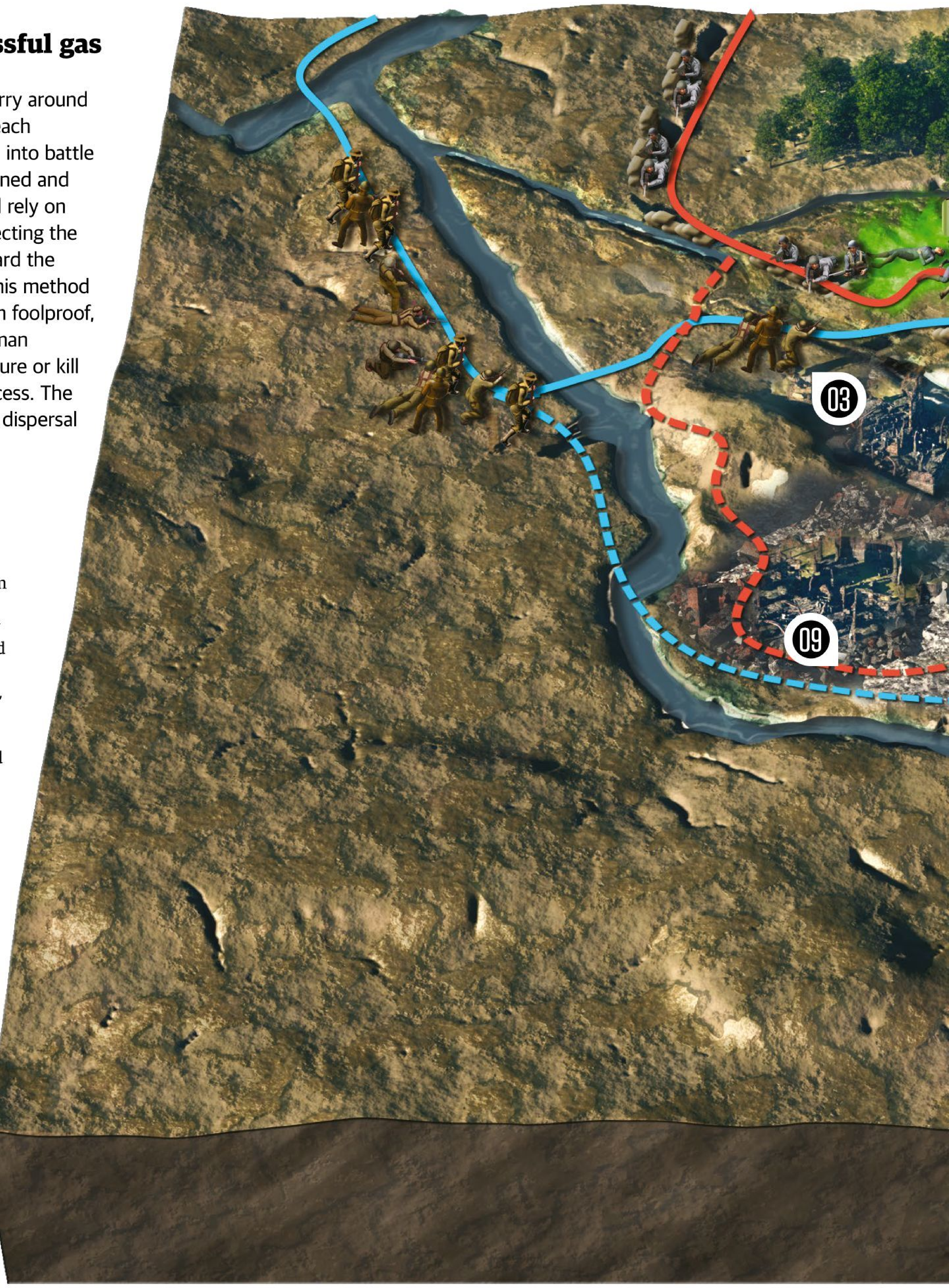
The German troops carry around 5,730 gas canisters – each weighing 41kg (90lb) – into battle by hand. They are opened and operated by hand, and rely on the wind direction directing the poisonous clouds toward the enemy combatants. This method of execution is far from foolproof, with a number of German troops managing to injure or kill themselves in the process. The first three attempts at dispersal are unsuccessful.

02 Successful gas attack

The Allied troops' luck doesn't hold. At about 5pm on 22 April, having been successfully unleashed by the German forces, a cloud of chlorine gas descends on a number of battalions, with the Algerian and French forces the worst affected. There are around 6,000 instant casualties, with the majority of the rest of them abandoning their positions in their desperation to get away from the gas.

03 Germans advance

The retreating Allied forces leave the way clear for the German forces to advance into the now-unoccupied territory, which they do at around 5.15pm. Moving 3-4km (1.9-2.5mi) into French territory, they capture Pilckem Ridge by the village of Pilckem, achieving their first objective of the battle.

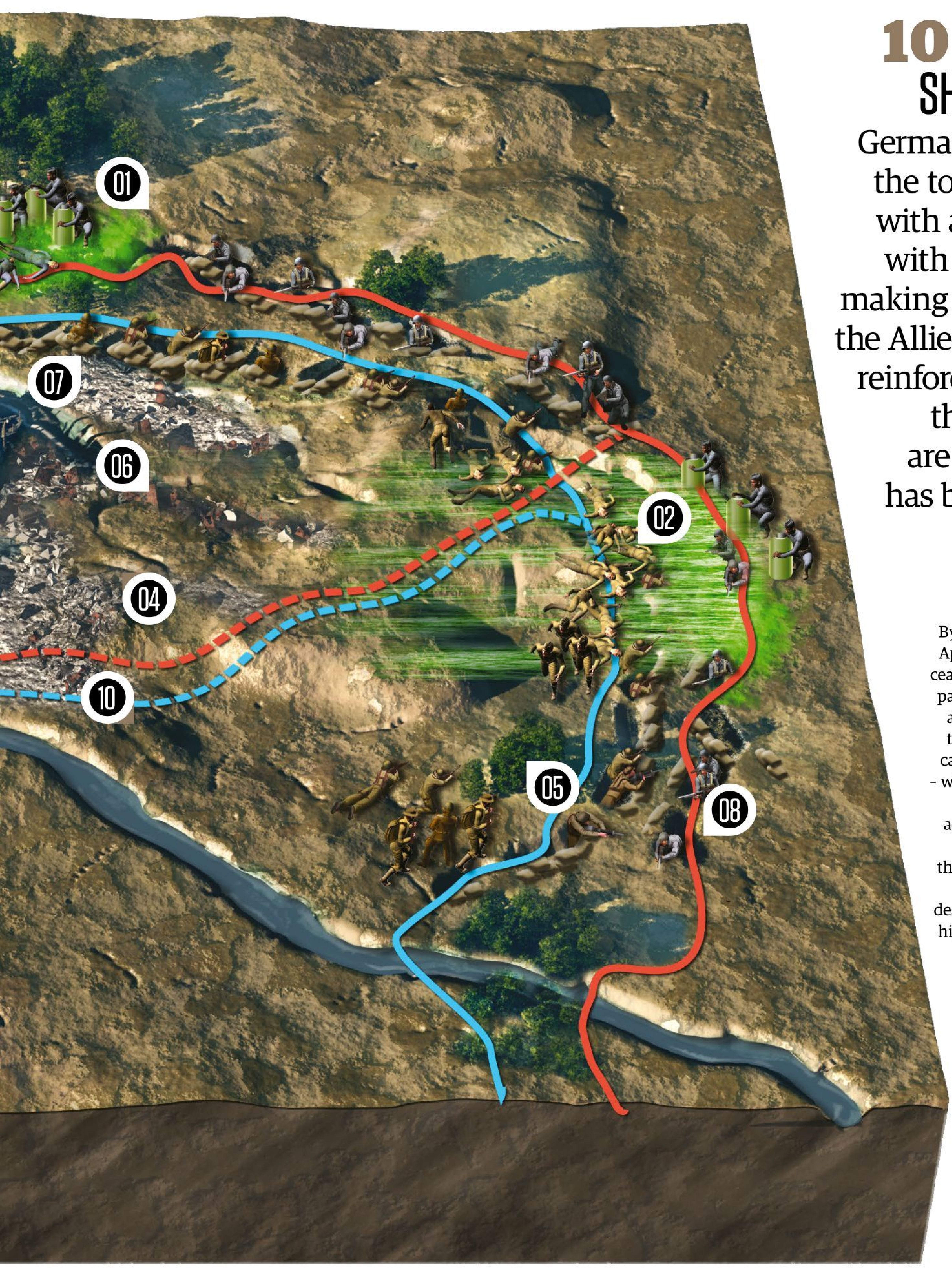


04 GERMANS ESTABLISH BRIDGEHEADS

Many of the German reserves have been sent to fight on the Russian front, but they make use of what they have, with the 45th and 46th Reserve Divisions setting up bridgeheads by the Yser Canal at Steenstraat and Het Sas. They infiltrate a gap in the front line, with Ypres now exposed.

05 The Canadians counter-attack

In danger of being exposed, the 13th Battalion of the 1st Canadian Division join up with some surviving French troops and launch a counter-attack on the left flank on the road between St Julien and Poelcappelle. In doing this, they successfully manage to halt the advance of the German 51st Reserve Division, preventing them from assisting with the main offensive.



10 GERMANS SHELL YPRES

Germans bombard the town of Ypres with artillery fire, with their aim of making it harder for the Allies to bring in reinforcements. By the time they are done, Ypres has been heavily damaged.

09 Germans halt advance

By around 8.30pm on 23 April, the German forced cease their assault. This is partly because they have already achieved one of their main objectives of capturing Pilckem Ridge – which is on high ground and thus a tactically advantageous spot – but also because they lack the manpower to sustain a continuous assault, despite having wreaked a high casualty rate on the Allied forces.

08 Canadians attack again

After the failure of the French assault, the Canadian 3rd Infantry Brigade plan another assault for 11.30pm. This is later postponed, before commencing again in the early hours of 23 April.

06 Langemarck captured

French soldiers occupying the village of Langemarck avoid the gas, but quickly find themselves overwhelmed by the German forces, who defeat them and capture the area.

07 FRENCH COUNTER-ATTACK HALTED

Six companies of the French 7th Battalion Zouaves make another counter-attack at about 8pm from Boesinghe, crossing the Yser Canal in the direction of Pilckem. They eventually come into contact with German forces, but despite several hours of fighting, little progress is made.

German Army

TROOPS SEVEN DIVISIONS

CASUALTIES 35,000

ALBRECHT, DUKE OF WÜRTTEMBERG

LEADER

The head of the German house of Württemberg was a decorated army general during WWI.

Strengths Previous experience of victory at the Battle of the Ardennes earlier in WWI.

Weakness His overly cautious nature cost him further advances.

GERMAN SOLDIER

KEY UNIT

The German forces came prepared, ready to use a deadly new weapon that would alter the game.

Strengths Possessed the tactical advantage of high ground.

Weakness Lacking sufficient numbers to complete their objective and win the campaign.

CHLORINE GAS

KEY WEAPON

The first time it was used in a large-scale offensive assault was in the protracted Second Battle of Ypres.

Strengths Devastatingly effective, difficult to defend against.

Weakness Dangerous to carry – wind blowing in the wrong direction can make it fatal to friendly forces.

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Origins of Verdun

Verdun, Northern France 1916

From 21 February to 18 December 1916, French and German forces took part in what would wind up being the longest land battle ever. Despite this dubious distinction, Verdun holds a strange place in history. It was not Stalingrad. Verdun did not bleed the Germans white any more than it did the French. It was not a major turning point, and if the French can claim to have won, it was a moral victory as much as anything; the losses suffered by both sides were almost identical.

If Verdun was not the glorious national victory that Stalingrad was, neither was it the staggering disaster that the Somme is – some might say unfairly – remembered as in Britain. In terms of sheer scale, the Somme was roughly double the size of Verdun. The battlefront was longer and the butcher's bill twice as large, despite it lasting only half as long as Verdun. The Somme carries with it the drama of 1 July 1916 and the loss of over 56,000 British soldiers, still the worst day in British military history. By comparison, the French lost 1,560 soldiers on the same battlefield that day, despite contributing roughly half as many troops as the British.

If Verdun does not suffer from quite the same staggering losses as the Somme does for the British, neither does it share as many high-water marks. At the latter, the French broke through twice; along the Flaucourt Plateau in July and again at Bouchavesnes in September. Armoured warfare was born on the Somme, when the British first unveiled their tanks and ordered them to lumber, ungainly, across No Man's Land at Flers-Courcelette on 15 September 1916. Such drama was in short supply along the Verdun front. At most, one could point to the recapture of Douaumont and Vaux, but as we shall see, these accomplishments were hardly equal to the political attention they received.

Despite its lower-key scale, scope and significance, however, the Battle of Verdun remains as one of the centre-pieces of the World War I. In the first of this two-part series, we will explain why.

The landscape of war

At its most elementary level, strategy is about dealing with fixed geographic obstacles. Although it is often overlooked, geography has an enormous impact on the conduct and planning of warfare. The strategies of island and maritime nations differ from those of landlocked or continental nations. Trade routes that have scarcely changed for centuries, even today continue to map out the economic sinews of our world. The transit routes of the modern day's Caribbean drug traffickers are the same ones used by Caribbean pirates over two centuries ago. The very same beaches, coves and inlets used to shield the unscrupulous pilfering of Spanish gold hundreds of years ago, today still offer security to profitable smuggling operations. As it is with these shady maritime routes, so it was with the Verdun region. The first forts to occupy this area were built nearly 2,000 years before the Germans launched their attack on 21 February 1916. The Romans had selected the spot as a critical defensive point against Germanic incursions from the east. Over a millennium later in the late 1600s, Sébastien Le Prestre de Vauban, the great Burgundian expert on all things siege warfare, built a grand star-fort at the site to, once again, defend 'France' from 'the Germans'. Remnants of this fort still remained in 1916 and were used as underground storage for men and materiel.

The 'modern' Verdun fort was born out of the Franco-Prussian War (1870-1871). With the loss of Alsace and Lorraine after this humiliating conflict, France also lost important natural defensive barriers. Faced with the likelihood of future conflicts with the newly created Germany, France had no choice but to build new defensive positions out of stone and mortar. The fortified region of Verdun was part of this new fortified perimeter. On the eve of the battle, however, the region (région fortifiée de Verdun, RFV) was hopelessly unprepared for the conflagration the Germans were about to unleash. The RFV's poor state of readiness was partly a response to modern firepower and partly a result of specific decisions made by French high command.

French forces fail to prepare

For nearly four centuries star forts had provided a formidable defence against invading forces, but this efficacy came to an abrupt end in 1914, with the swift capture of Liège and Namur by German forces. Modern, formidable fortresses were simply crushed by the weight of fire unleashed by Krupp and Skoda's howitzers and heavy mortars. Fortresses provided convenient targets for heavy artillery and their defenders were locked in place.

Instead of fixed fortifications, infantry had to rely on field fortifications (trenches) if they were to stand any chance of surviving the onslaught of modern firepower. The French took note of this, and once the Western Front had settled down into

VERDUN
1914
1918

The Verdun Cross, created to commemorate the 1916 battle trench warfare, ordered that trenches be dug in and around their forts; not just Verdun but also Toul, Belfort and elsewhere. In and of itself this would make the fortified regions even stronger. However, French strategy under commander-in-chief General Joseph Joffre included a policy of stripping fortified zones of most of their defensive weaponry.

In 1914-15 the French felt under substantial pressure to do whatever they could to repel the Germans and drive them out of France. This, inevitably, meant that the country would have to go on the offensive. The only problem was that France had a severe deficit of heavy artillery. Its army marched to war with only 308 heavy guns, and barely more than 100 of these were truly modern, rapid-fire howitzers, namely the 155mm court tir rapide Rimailho.

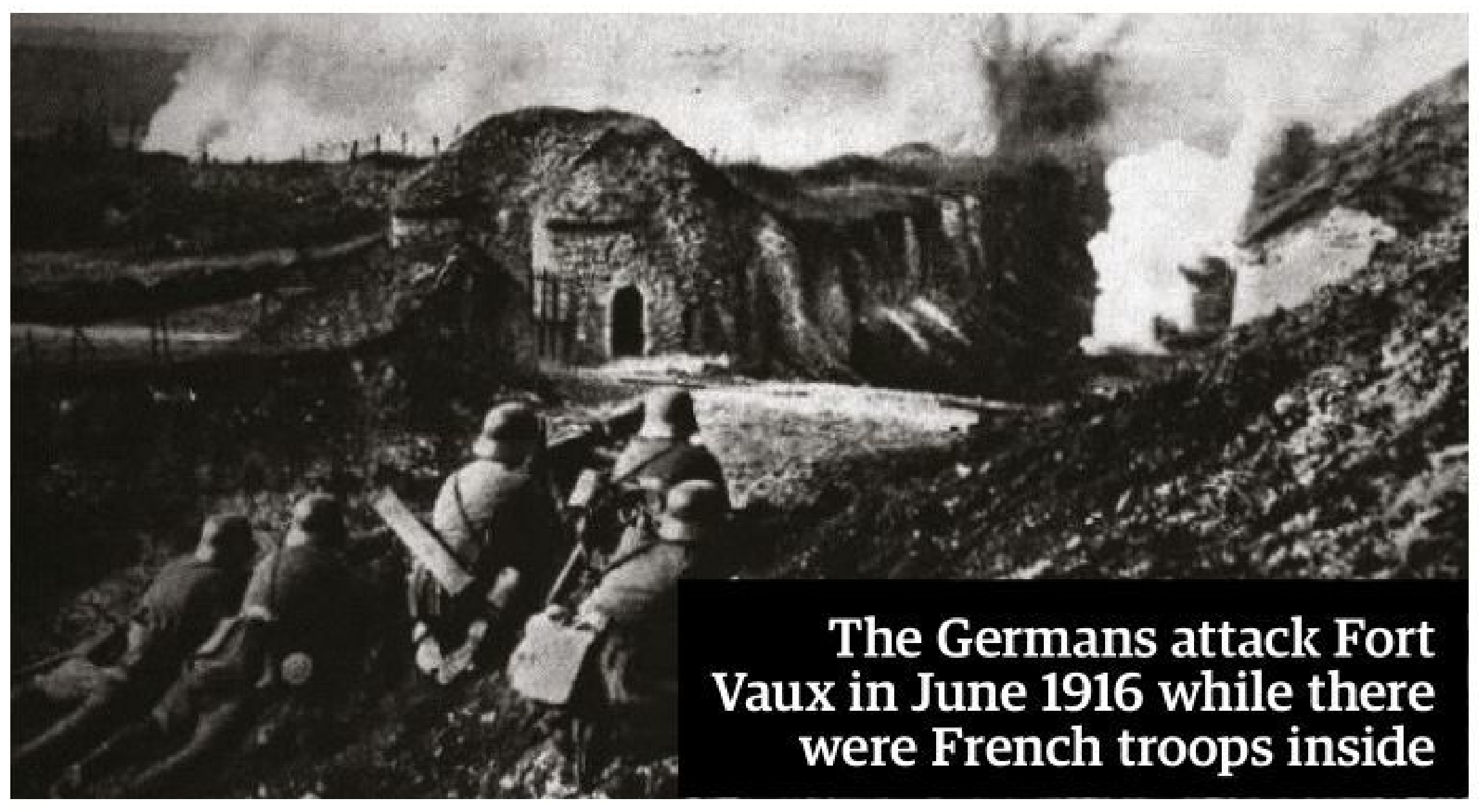
What France did have, however, was roughly 11,000 old artillery pieces from the 1870s and 1880s stored away in depots and fortresses. These were stripped en masse from their resting places and pushed into service as a desperate stop-gap measure so that the army could launch a series of, ultimately, failed offensives. The last and largest of these, Second Champagne, 25 September to 6 November 1915, hit Verdun especially hard. In August 1915 alone the RFV lost 20 batteries of heavy guns; they were sent north in preparation for the big push in the Champagne.

As the battle neared, Joffre began demanding not only heavy artillery from Verdun but also machine guns, mortars, grenades and other crucial weapons. Before Second Champagne came to a close, entire infantry divisions were lifted from the region and shuttled north, leaving it weak and undefended. Few within the military knew or cared about the situation; except for Colonel Émile Driant, an officer serving in the région fortifiée de Verdun.

Colonel Driant is one of the most interesting soldiers in service in World War I. A graduate of the elite military school Saint-Cyr, he went on to become a popular author – writing under the uninventive pseudonym 'Capitaine Danrit' – focused on theories of what the next war would be like. As a young man, he married the daughter of none other than General Ernest Boulanger, the ardent nationalist politician and soldier who nearly propelled France into a constitutional crisis.

From 1910, Driant served in the Chamber of Deputies, representing Nancy which had effectively become a border-town with Germany after the loss of Alsace-Lorraine in 1871. This combination of a fascination with 'future war' – which he expected to be against Germany – nationalism, and defence meant that Driant was uniquely placed to command troops in the RFV. He fought vigorously against Joffre's removal of artillery from the sector in 1915, and was not above calling in favours from his colleagues in government to help give his pleas additional weight. On 15 December 1915, he personally wrote to the Minister of War, Joseph Gallieni, and described the pitiful state of the Verdun sector, but there was little the Minister could do.

Unfortunately for the men defending Verdun, Driant's efforts were in vain. By October 1915


The Germans attack Fort Vaux in June 1916 while there were French troops inside

A fixed artillery position within Fort Vaux. Such positions were anachronistic before the cement had hardened

Joseph Joffre, commander-in-chief of the French Army

> "Joffre began demanding not only heavy artillery from Verdun but also machine guns, mortars, grenades and other crucial weapons"

German troops marching to the front during the campaign

N
Moirey
Ville
Azannes
Flabas
Consenvoye
Brabant
Haumont
Beaumont
Forges
Samogneux
Ornes
Maucourt
Mogeville
Bezonvaux
15 December 1916
Champneuville
Louvremont
Champ
26 February 1916
Douaumont
Diepre
Fort Douaumount
Bras
Chamy
Vaux
Damloup
Fleury
Fort Vaux
6 September 1916
Fort Bois Bourrus
Fort Souville
Fort Tavannes
Eix
Abaucout
Fort Cocises
Thierville
Belleville
Fort St. Michel
Fort Chans
VERDUN
Moulanville
Fort Sartelles
Fort Belrupt
Fort Moulainville
Belrupt
Chatillon
Belleray
Haudainville
Fort Dugny
Fort Haundainville
Dugny
Regret
BATTLE OF VERDUN
21 February 1916 - 16 December 1916
Fort
Battery
0
1km
5km

Verdun prelude

A view of the landscape soon to be re-shaped into a vision of hell

The Verdun battlefield began as a salient jutting out from the fortified region of Verdun (RFV). French forces were thinly spread out along this defensive region, providing a buffer for the 19 forts which surrounded Verdun itself. Their precarious position was made even weaker by the Meuse river, which ran through the middle of the battlefield. This made it very difficult for the French to enjoy the usual advantages of interior lines when meeting with attacks along different points of the line. The initial German assault would fall on the right bank of the river between Brabant and Ornes.

the RFV was already down to just three divisions and 34 territorial battalions. While the three divisions that the RFV lent to the Champagne battle (3rd, 4th and 53rd divisions) would eventually return, they returned shattered. Each had suffered serious casualties and would have taken months to regain their fighting power, even in the best of circumstances. To make matters worse the sector did not have well-developed trench lines. Most of the area was actually just a thinly interlinked series of independent field fortifications tying together the various fortresses. There was no second line of trenches to speak of at a time when it was customary to have one nearly as strong as the first. This was the state of affairs right before the German attack.

The first inklings of a German offensive began to appear in January 1916, when a German deserter captured in Denmark told French intelligence of the planned strike at Verdun. Meanwhile, however, Driant's own 56th Battalion of chasseurs à pied (elite light infantry) had begun to notice a build-up of enemy forces and capabilities opposite them. By 16 January, General Frédéric-Georges Herr, commander of the RFV, expressed his nervousness to Joffre, who allowed him to retain control of the 51st division, which had been slated to move elsewhere in France.

A few days later, Joffre dispatched the commander of the Centre Army Group (Group d'armées de centre, GAC), General Édouard de Castelnau, to the sector to inspect the situation. By the end of January, the RFV had been placed under command of the GAC, which eased its logistics and would allow for the more rapid deployment of reserves if needed. At this time Joffre also began to allow artillery to trickle back into the sector. Roughly ten groups of heavy artillery were moved in late January, including two groups of modern 155CTRs, the best gun the French had.

While this was something, it could never hope to match the 160 batteries of heavy and super-heavy guns sitting opposite them; the Germans had some 1,200 artillery pieces in total and 2.5 million shells. To make matters worse, French defensive positions were still thin, scrabbly and unsuited to the task of defending against a heavy German thrust. The RFV still numbered only 11 divisions compared with the 17 German divisions - totalling some 300,000 men, many of them from elite formations like General Ewald von Lochow's III Corps. Despite last-minute, desperate attempts to prepare Verdun for the coming onslaught, they would find themselves woefully unready and overwhelmed.

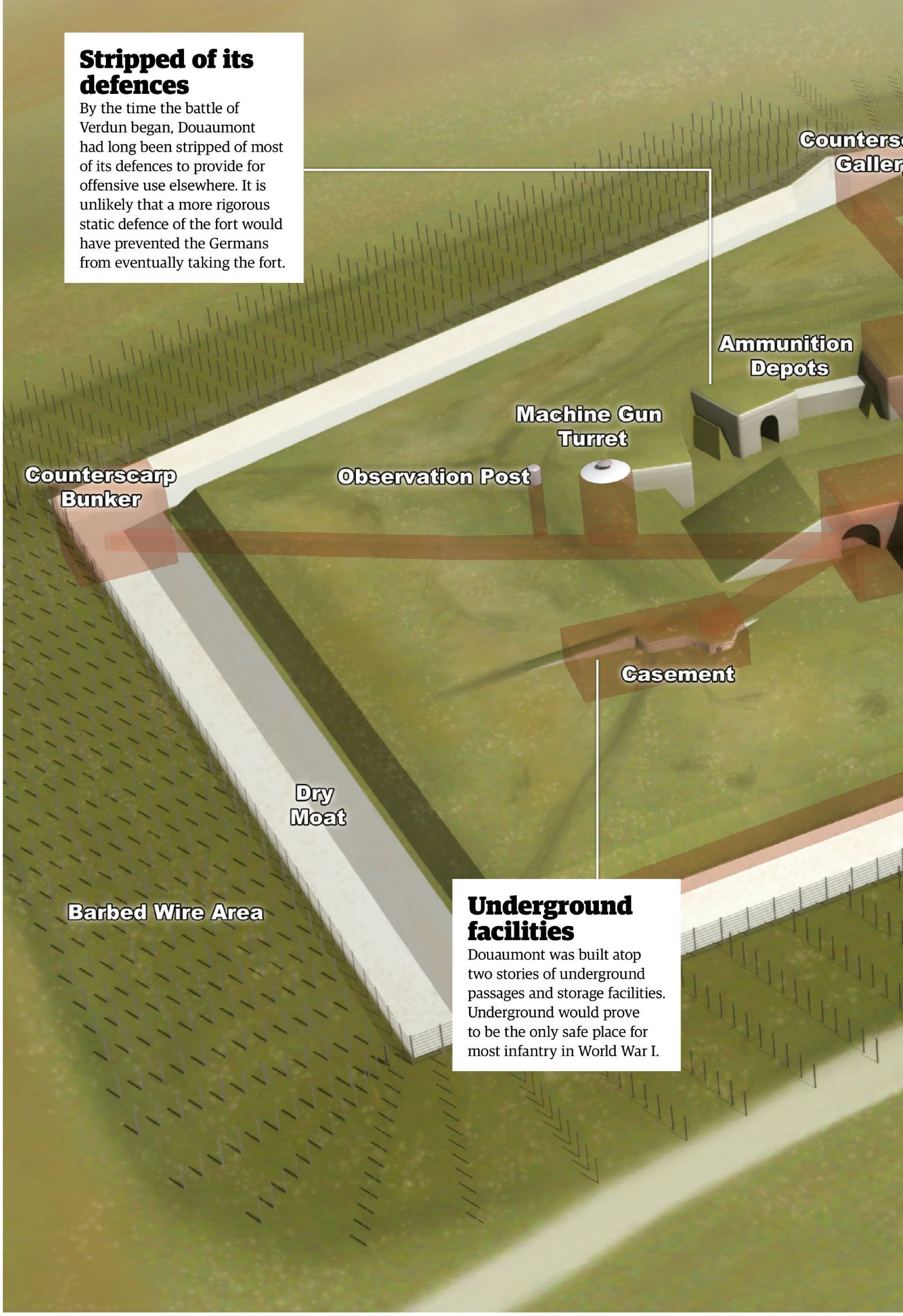
The German plan

In stark contrast to the lack of preparedness among French forces, the German army was primed and ready for a battle that it hoped would swing the war in their favour. The battle was conceived by General Erich von Falkenhayn, commander-in-chief of the Germany army from late 1914 until August 1916. Falkenhayn was a naturally pessimistic, taciturn and private man. When he took over for the nerve-

Fort Douaumont

A look inside the ageing, but sturdy, fortified focus of the battle

Built starting in the 1880s Douaumont was part of the defensive structure France constructed in response to their humiliating defeat in the Franco-Prussian War. The fort boasted ample subterranean storage facilities and rotating artillery turrets to augment its traditional fixed artillery emplacements. Its shape reflected lessons learned from centuries of fortification construction, and allowed for wide, overlapping fields of fire from artillery and fixed machine gun emplacements.

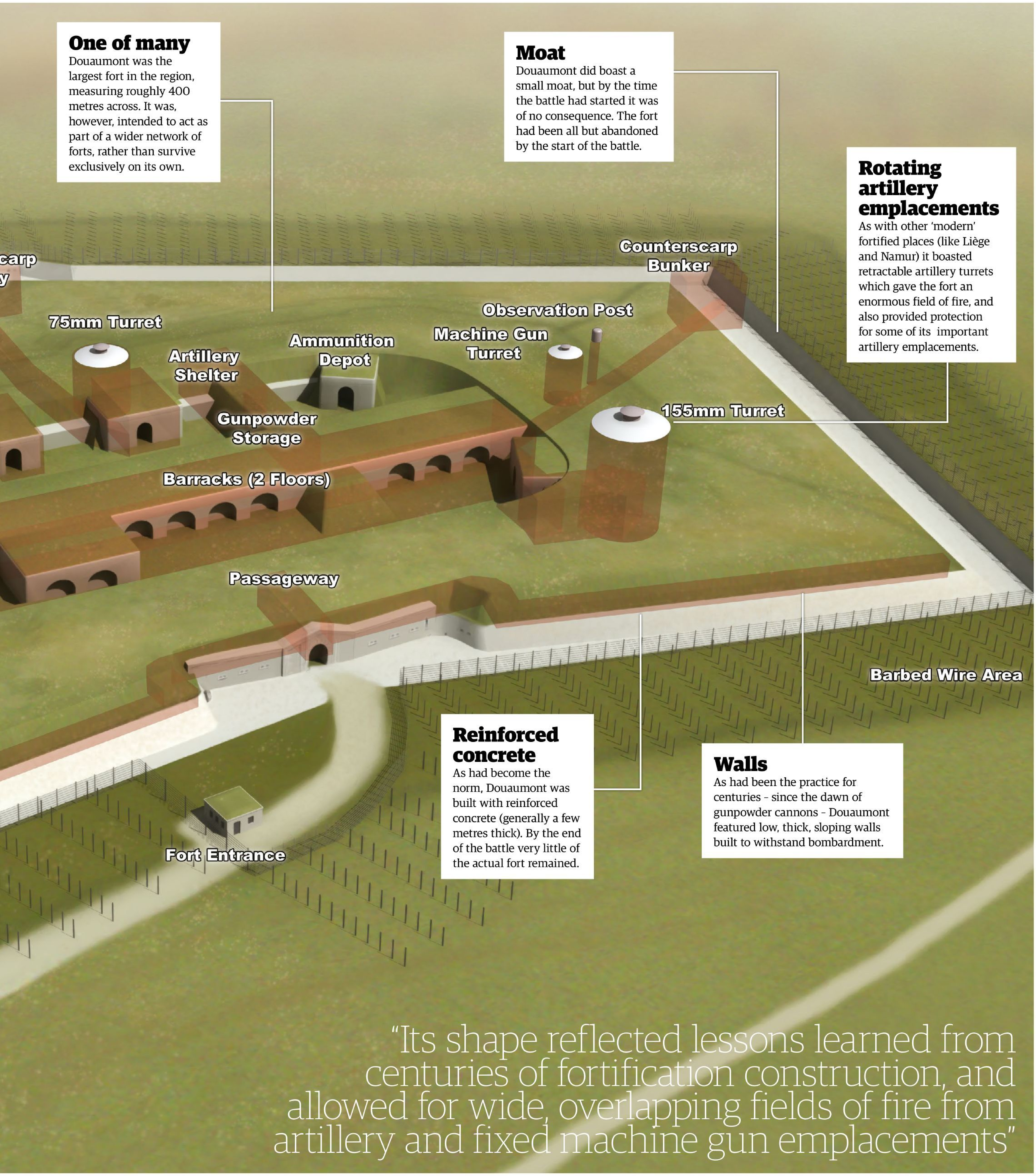


Stripped of its defences

By the time the battle of Verdun began, Douaumont had long been stripped of most of its defences to provide for offensive use elsewhere. It is unlikely that a more rigorous static defence of the fort would have prevented the Germans from eventually taking the fort.

Underground facilities

Douaumont was built atop two stories of underground passages and storage facilities. Underground would prove to be the only safe place for most infantry in World War I.


carp
y
75mm Turret
Artillery Shelter
Ammunition Depot
Machine Gun Turret
Observation Post
Counterscarp Bunker
Gunpowder Storage
155mm Turret
Barracks (2 Floors)
Passageway
Barbed Wire Area
Fort Entrance

One of many
Douaumont was the largest fort in the region, measuring roughly 400 metres across. It was, however, intended to act as part of a wider network of forts, rather than survive exclusively on its own.

Moat
Douaumont did boast a small moat, but by the time the battle had started it was of no consequence. The fort had been all but abandoned by the start of the battle.

Rotating artillery emplacements
As with other 'modern' fortified places (like Liège and Namur) it boasted retractable artillery turrets which gave the fort an enormous field of fire, and also provided protection for some of its important artillery emplacements.

Reinforced concrete
As had become the norm, Douaumont was built with reinforced concrete (generally a few metres thick). By the end of the battle very little of the actual fort remained.

Walls
As had been the practice for centuries – since the dawn of gunpowder cannons – Douaumont featured low, thick, sloping walls built to withstand bombardment.

> "Its shape reflected lessons learned from centuries of fortification construction, and allowed for wide, overlapping fields of fire from artillery and fixed machine gun emplacements"

© Adrian Mann

wrecked Helmuth von Moltke the Younger he looked out at a very difficult strategic position. Germany, despite the excellent performance of its armed forces in the opening months of World War I, found itself bogged down in a struggle on two fronts against multiple enemies with vastly deeper pools of both manpower and capital. Germany had no chance of victory at all if at least one of the Entente powers could not be knocked out of the war very soon.

For many in the German army, Russia soon seemed like the logical power to attack. After all, 1915 had been disastrous for the Russian army. Starting in May 1915 at the Battle of Gorlice-Tarnow, where German heavy artillery outnumbered the Russian 100 to four, the Russians lost a long series of battles in what was termed 'the Great Retreat'. Over the course of the year they lost nearly all of their Eastern European holdings and found themselves fighting German troops on Russian soil, taking staggering casualties. Meanwhile, French and British attacks on the Western Front had failed to threaten German positions in France. For many in Germany's high command it seemed prudent to rest on the defensive in the West and to continue to push along the Eastern Front.

Falkenhayn saw it differently. Russia was vast, and could theoretically continue to absorb staggering losses in men, materiel and pure geography without definitely being knocked out of the war. Worse still, however, was the fact that the further the Germans advanced the longer their logistical lines would have to stretch. This not only would increase the cost of fighting on the Eastern Front – an oft-overlooked consideration in 'total', industrialised war where every resource is precious – but it would lock German forces into a rigid posture.

By late 1915 the German army, despite its substantial advance into Russia – over 200 kilometres – was still in a position to shift reserve units to the Western Front relatively quickly in case of an emergency. The further into Russia that the Germans advanced the more difficult this would become for them.

Such a situation would force the Germans to either maintain more forces in the West than they really needed. The choice was either starve the Eastern Front of men, or run the risk of France and Britain cracking their lines in the West, leading to a potentially catastrophic retreat to some new line of defence. Neither situation was ideal.

Erich von Falkenhayn, German soldier and Chief of the General staff during WWI

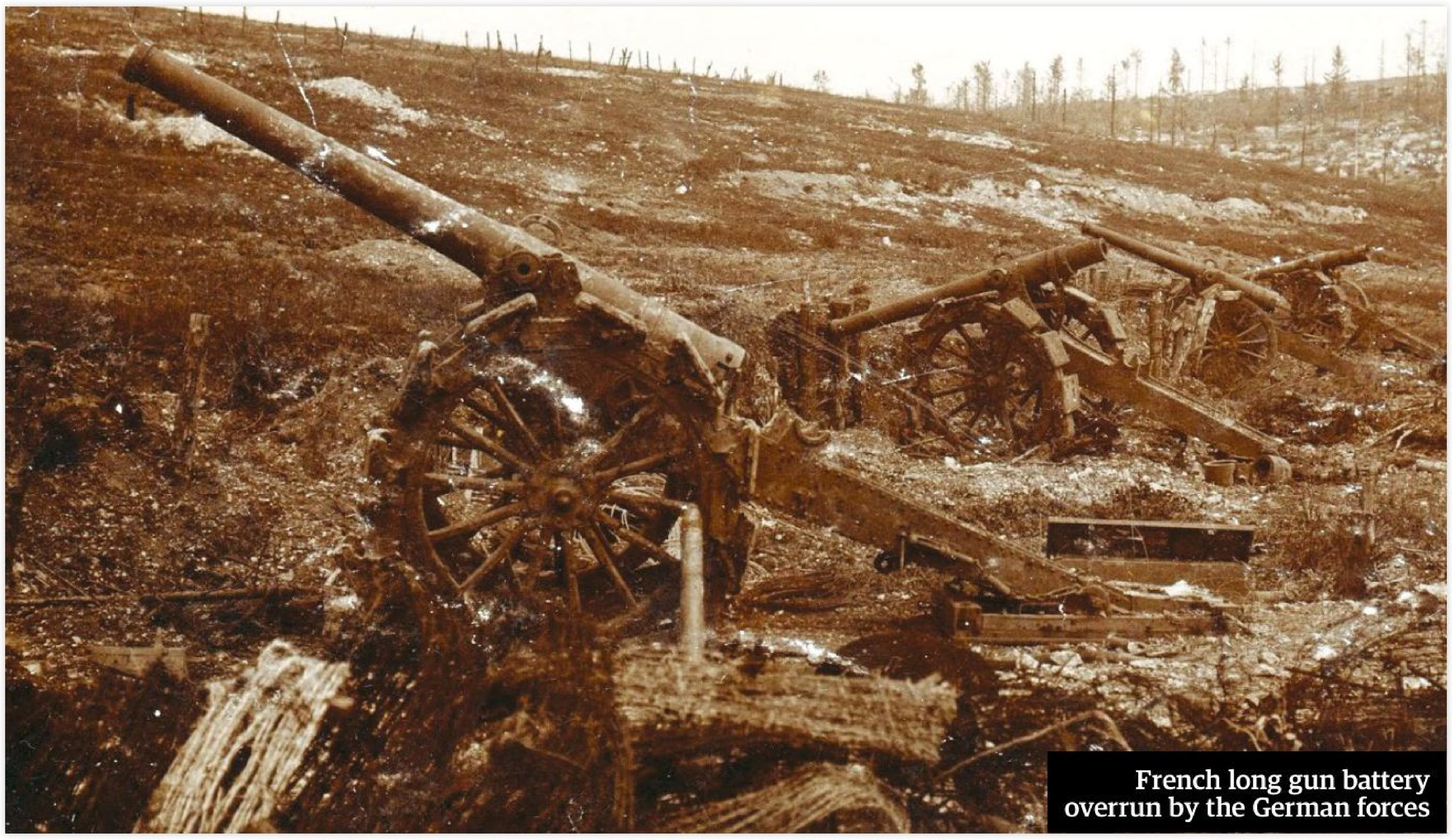
"They shall not pass." The phrase became famous during the defence at Verdun. Here French reserves cross the river

For Falkenhayn, attacking the West was the most promising of a range of poor strategic options he had available to him. He knew that the series of attacks the French launched in late 1914 and 1915 - three in Artois, two in Champagne and smaller attacks further south - had cost them staggering losses. Between August 1914 and February 1916 France lost roughly 650,000 soldiers, dead. This was nearly as many as Britain would lose in the entire war - subtracting Dominion losses - and substantially more than the number of Britons or Americans who would die in combat from 1939-1945. Such a rate of loss simply could not be sustained forever and Falkenhayn knew it. Even if he did not have precise casualty figures for the French and British up to that time.

Given the difficulty of attacking against increasingly complicated trench networks, it seemed unlikely that Germany could take Paris or drive the British army back into the sea. Even if Germany could, the casualties sustained would make the effort something of a pyrrhic victory, therefore harming Germany's chances of winning a lengthy war against Russia. Falkenhayn needed a way to inflict substantial casualties on his enemies without sustaining large casualties himself. He hoped that he could attack an important point along the French line and then wait on the tactical defensive, thwarting the inevitable French counter-attacks. By doing so he hoped to 'bleed France white' and compel their government to sue for peace. This was the first spark of the idea that would become the Battle of Verdun.

The importance of Verdun

Aside from vague historical significance - which many historians now dispute - Verdun, at the very least, carried with it some important tactical advantages for a German attack. The French position constituted a salient, which meant that the Germans could attack the French from three directions at once. Furthermore, the French



French long gun battery overrun by the German forces

The city of Verdun lies along the Meuse River, a strategically important feature in France's history

The Crown Prince had earned a 'playboy' reputation before the war that embarrassed his royal parents

Crown Prince Wilhelm

Son of the Kaiser, and the nominal commander of the German forces during Verdun

Son of the last 'Caesar' of 'Germania' the Crown Prince fulfilled his old ancestral duty of commanding military forces in the field. As archaic as it now seems, the Crown Prince was not the only German military leader who was awarded his command by dint of his birth. Many of the senior German generals were from the aristocracy, and some of them proved remarkably talented; most notably Rupprecht, the Crown Prince of Bavaria.

The Crown Prince is often chalked up as one of those most opposed to, even disgusted by, the war. This is probably an exaggeration, and one that principally arises from comparing the Crown Prince to his father, who was famously fond of all things military. Despite his apparent distaste for the war the Crown Prince did agree with Falkenhayn on certain aspects of the Verdun battle, including the need for secrecy and the importance of surprise. Once battle began the Crown Prince did somewhat better than his critics expected him to do, but was nevertheless sidelined in November 1916 and forced to give up the command of Fifth Army. This fate befell commanders on both sides in the final months of 1916 and is not a fair verdict on his command.

French troops passing through the ruins of Verdun. There is a dark timelessness to shattered buildings, echoing across time from scenes like this to Homs, Syria today

position in early 1916 left them with their backs to the river, meaning retreat would be very difficult, if not impossible. The German side of the battlefield was thickly wooded, which would help mask the build-up of German forces before the attack. Furthermore, this build-up would be facilitated by an excellent rail network, most of which – 11 out of 14 rail lines – had in fact been built by the Germans. In comparison the French had only two suitable rail lines feeding into their side of the sector. This meant that Germany could much more easily sustain their efforts, and might be able to simply overload the French logistical train if they could maintain a high-enough level of intensity.

German intelligence had learned that the forts in and around Verdun had been stripped of much of their artillery, so the Germans knew that the French were weaker in the Verdun sector than they had ever been. This was compounded by the relative quietness of the region, which had lulled the French into a false sense of security. Their trench networks were nowhere near as developed as those in other, more active, sectors along the Western Front.

There may have been sound strategic and tactical advantages to Falkenhayn's plan, but he would have a difficult time translating his vision to those under him who would actually have to carry it out. Despite staking out a baldly attrition strategy, Falkenhayn could not tell his subordinates that this was his ultimate goal – the effect on morale would have been crushing. How many soldiers would happily have gone over the top knowing that their commanders saw them as taking part in a pure numbers game? Some tangible goal had to be offered: the city of Verdun itself.

Despite Falkenhayn's strong efforts to avoid anything that might even vaguely resemble a French-style all-out attack, the tactical planning for the offensive soon took on a life of its own. Even those who understood Falkenhayn's broad intentions failed to understand the implementation that the general was hoping for, frequently pushing too far, and seeking to conquer too much.

Confusion and miscommunication were perhaps to be expected from an organisation with such an impersonal and secretive leader. Falkenhayn was adamant that any discussion of the upcoming battle – codename: Gericht – must happen in person. No written records were to be left behind, to avoid the possibility of a leak. None of the armies along the Western Front were given clear instruction on what Falkenhayn expected of them, not even Fifth Army, situated in the Verdun sector. His planning for Verdun was so opaque that even now we have very little documentary evidence for it. We have to piece together thin scraps of material to paint a picture of what he was after, and how he conceived of the battle.

Perhaps making the problem worse, Fifth Army was headed by none other than the Kaiser's son: Kronprinz Wilhelm. On the one hand, having the Kronprinz lead the battle opened up the possibility for a major political victory, not just for Germany but for hereditary monarchy in general – a grand dynastic victory for the Hohenzollerns. Nevertheless, the Kronprinz was not a true professional soldier, and to some had to be 'handled' by expert military advisors. While this did not necessarily render sound military judgement impossible, it did introduce the possibility of the Kronprinz meddling where perhaps he should not.

Despite these planning woes, Fifth Army did a reasonably good job of preparing itself for the upcoming battle. Its intelligence circulated a note around which said that they expected a French attack to be launched in February. The hope was that the note would fall into French hands and act as a sort of cover for the preparations Fifth Army was making in January, and February to their trench systems.

They also improved their aerial reconnaissance and more aggressively fought to maintain control of the air. A substantial amount of digging was also required to construct the necessary dug-outs, trenches and depots from which the attack would be launched. Most of the digging was conducted at night, to help mask the amount of effort the army was making. The long nights of January and February were a helpful ally here.

As the day of the attack neared, and new army corps appeared in the sector, they were kept away from the front, out of sight of French eyes. Instead they were only cycled into the line immediately before the attack went in, to avoid the French noticing the introduction of new, fresh units to the sector. These efforts, and a fortuitous snowstorm, would effectively mask the German attack, and on 21 February 1916 the French were caught off-guard.

© Alamy, Getty

French soldiers charge out of their trench with bayonets fixed

> “How many soldiers would happily have gone over the top knowing that their commanders saw them as taking part in a pure numbers game?”

Battle of Verdun

Verdun, Northern France 1916

On 12 July 1916 the fate of Verdun, France's ancient bastion, was all but secured. After nearly five months of hammering away at French positions, winning success after success and inching ever closer to that citadel on the Meuse River, the German army was within reach of Verdun. There was only one last obstacle: Fort Souville.

This fort rested on the last imposing heights before Verdun. From there the Germans could easily swamp the ruined Fort Saint-Michel – standing modestly atop a hill just 344 metres tall – and be in a position to assault Verdun directly. The artillery preparation began on 10 July at 12pm; the Germans would concentrate 330,000 shells on an area just 25 kilometres square. To this the French would add nearly 200,000 shells in counter-bombardments. More than 500,000 shells fell within 20 hours. The Germans threw Operation 'Croix Verte' into this din, with the launching of 63,000 artillery shells, filled with deadly phosgene gas, against French artillery positions.

Sergeant Marc Boasson described the gas attack as: 'A gripping spectacle; little by little, we saw the country disappear, the valley become filled with an ashy coloured smoke, clouds grow and climb, things turn sombre in this poisoned fluid. The odour of gas, slightly soapy, occasionally reached us despite the distance. And at the bottom of the cloud one heard the rumble of explosions, a dull noise like a muffled drum.'

The intensity of the bombardment and counter-bombardment was immense, and losses were heavy on both sides before the attack was even launched. The Bavarian Alpen, an elite formation tasked with assaulting Souville, suffered heavily. Its

The skeletal corpse of a soldier lies unburied on the battlefield

French troops take shelter in a cramped trench for protection

140th Infantry Regiment was hit especially hard; the regiment's 2nd battalion had lost virtually all of its officers. The Bavarian Guard had lost seven of its eight trench mortars, plus 37 dead and 83 wounded before even going over the top. Other units in the regiment refused to advance due to heavy losses.

Those elements of the Alpen Korps that fought on, did so through dense gas, and were met with intense French machine gun and artillery fire. Despite heavy losses they pressed on to within 500 metres of Fort Souville. The French, on their side, launched manic and poorly organised counterattacks to try to stem the tide. General Charles 'the butcher' Mangin sent men from the 114e RI (régiment d'infanterie) to futile night attacks. Confused and disoriented they attacked in the wrong direction, and suffered heavy casualties. Such weak efforts had no hopes of success, and despite their losses, German troops stood ready to assault Fort Souville on the morning of 12 July. The fate of Verdun would be sealed on the glacis of Fort Souville shortly after 9am.

Without officers, hemmed in by intense artillery fire, a small remnant of the 140th IR (German infantry regiment) found themselves unable to withdraw and rejoin their comrades. Instead, they chose to advance, sending forward a section of just 30 men (Section Bayer of 2nd Company). Alone, they stormed up the glacis of Fort Souville at 9am on 12 July.

The defenders of the fort were hardly in a better position. Commanded by the 65-year-old Lieutenant-Colonel Astruc de Saint-Germain, the garrison had for days been sealed off by a curtain of fire and steel, hammered by German artillery, and deluged with poison gas. One company of reinforcements under Lieutenant Dupuy had been sent to pass through the German artillery barrage separating the fort from the rest of the French

army; only 60 men survived to reach the fort. It was these same men that defended the glacis from the haggard assault of Section Bayer.

These 90 French and German soldiers, worn and weathered, would decide the fate of Verdun. Section Bayer attacked and was met with Dupuy's machine guns; their rapid chatter silenced the German assault. Fort Souville, and so Verdun, was safe. After 12 July the Germans would have no hope of capturing that grand objective.

By now the Battle of the Somme was raging, pulling German attention, men and materiel northwards. Yet, the Verdun battle ground on for another five months. It had taken on a life of its own, living on only by some internal logic, which compelled the French to launch a series of costly counterattacks to regain the ground lost since February that same year. The great events of history are so often larger than the men and women who populate and perpetuate them – they seemingly have willpower unto themselves. This article explores the life, nature and impact of this, the longest battle of World War I: Verdun.

A German soldier takes up a position next to a corpse, thought to be French, near Fort Vaux

21-23 February

The battle of Verdun began on 21 February 1916, after many weeks of preparation through harsh winter conditions. To begin, the Germans unleashed a dense artillery bombardment on French positions in the sector. Even though many French soldiers had expected the attack, the sheer weight of fire was overwhelming.

The Germans under Crown Prince Wilhelm, the son of Kaiser Wilhelm, had managed to sneak an additional 160 batteries of heavy and super-heavy guns into the sector without the French noticing. This was roughly half as many heavy guns as the entire French army, 2.6 million strong, had marched to war with just 18 months prior.

The initial German bombardment was awe-inspiring. French aviators couldn't place the enemy batteries in this din; too many were firing too rapidly from all directions. Most of this bombardment was focused on the triangle Brabant-Ornes-Verdun. Against a front of roughly 40 kilometres, the Germans launched 1 million shells, many of them filled with lachrymatory or poison gas. The fire was so thick that French runners couldn't penetrate it, isolating forward French positions and breaking their systems for command and control.

This initial bombardment lasted for nine hours, from 7am to 4pm. Then, the attack went in. French defenders braced themselves for the expected hordes of German forces to come swarming across No Man's Land; the Germans, however, had a different idea.

Instead of launching the sort of 'massed' attack that had become the norm on the Western Front, they surreptitiously sent small packets of men across No Man's Land – in some areas a vast 800 metres wide – to gently probe and prick the French line, testing for any weaknesses. The Germans seemed to be practicing the sort of warfare that officers like Philippe Pétain had been advocating for the French troops: the artillery conquers, the infantry occupies.

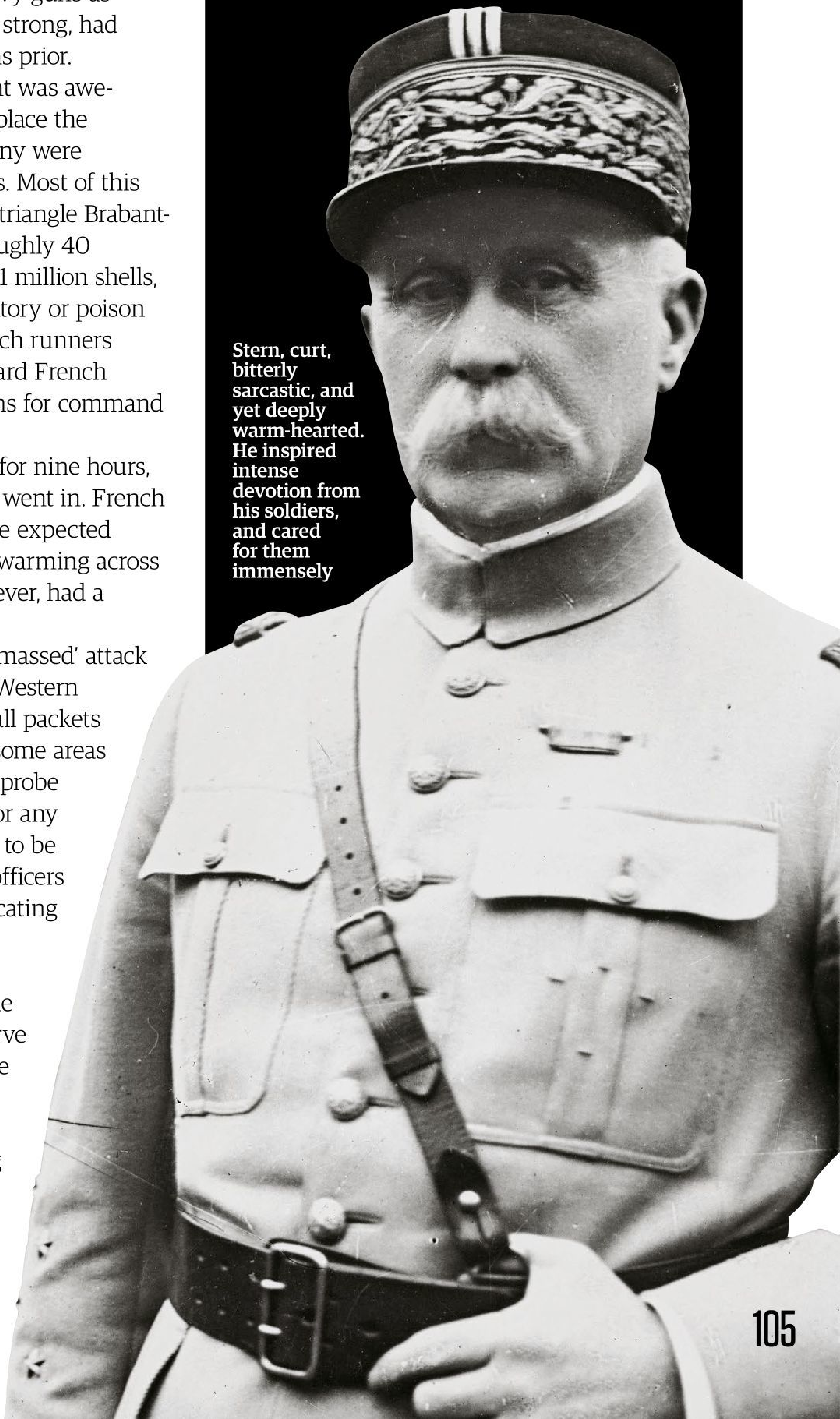
At the bois (wood) d'Haumont the German attack, launched by a reserve Jäger battalion, consisted of just one adjutant and 53 men. These men were followed by a second wave 150 metres behind them consisting of one adjutant, 36 men and two flamethrowers. The third wave, also 150 metres back, consisted of

The rise of Petain

The saviour of Verdun, a caring commander yet a strict disciplinarian, a Marshal of France, a commander-in-chief and later Nazi collaborator

Philippe Pétain has a complicated history and occupies a bizarre place in historical memory. He is simultaneously the man who saved Verdun, and also the President of Vichy France who collaborated with the Nazi regime. A position he won in part because of the reputation he won in World War I.

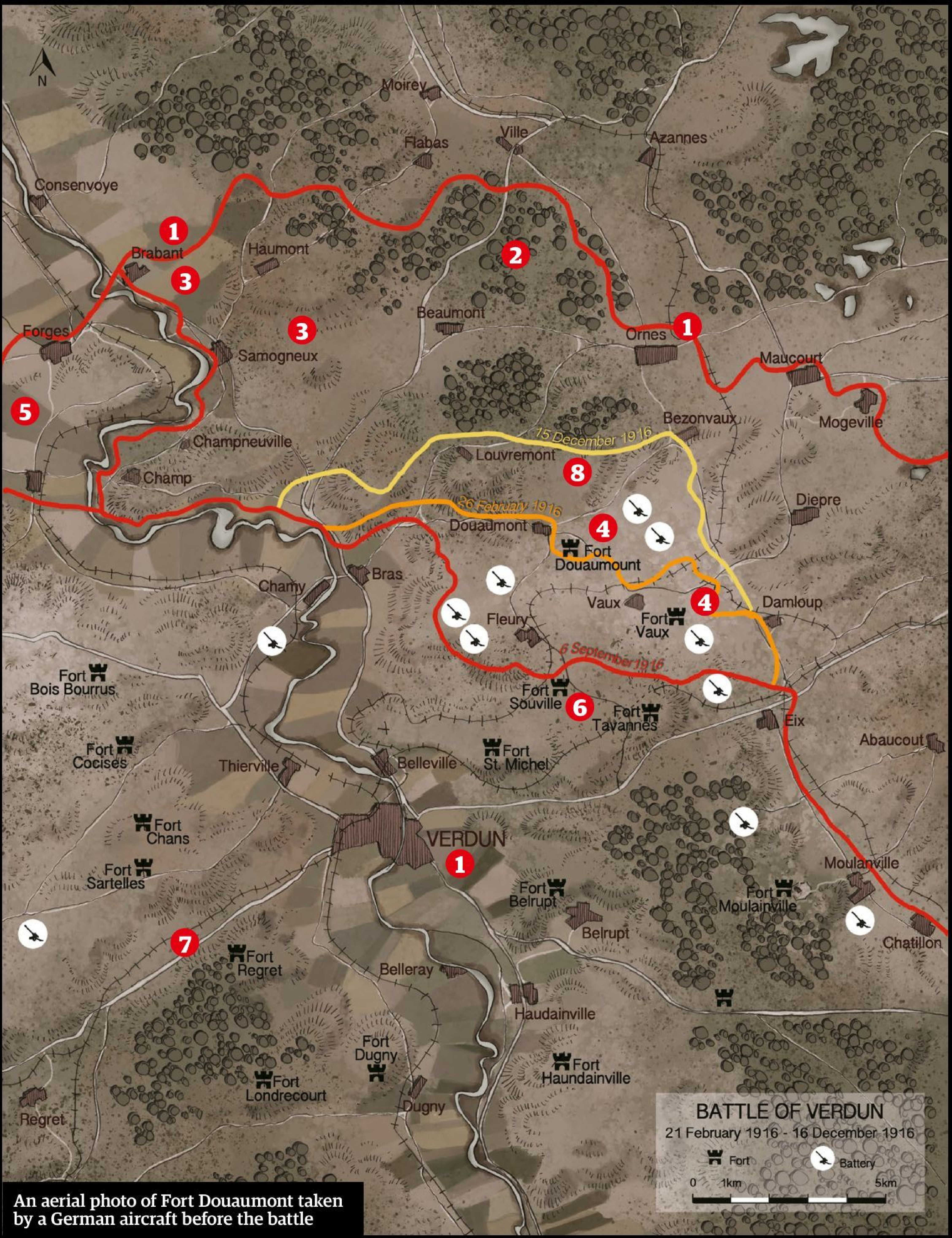
In WWI he is known for his tactical caution, and his desire to preserve the lives of his men above all other considerations. This made him hugely popular, and made him the obvious choice to succeed Nivelle during the French mutinies of 1917. At Verdun he did what he had always done: he insisted on a careful, scientific prosecution of the war. Pétain paid detailed attention to tactical minutia, especially the deployment of artillery. He completely reorganised the French counter-barrage system, which broke up German attacks, and the logistical structure of French forces during the battle. Pétain was also a long-time advocate for the better use of aerial reconnaissance.



Stern, curt, bitterly sarcastic, and yet deeply warm-hearted. He inspired intense devotion from his soldiers, and cared for them immensely

Verdun Battle Map

Verdun was fought in a salient, presenting enormous logistical challenges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Champ
Louvremont
15 December 1916
26 February 1916
Douaumont
Fort Douaumont
Diepre
Bras
Charny
Vaux
Fort Vaux
Damloup
Fleury
6 September 1916
Fort Bois Bourrus
Fort Souville
Fort Tavannes
Eix
Abaucourt
Fort Cocises
Thierville
Belleville
Fort St. Michel
Fort Chans
VERDUN
Fort Sartelles
Moulainville
Fort Moulainville
Fort Belrupt
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Chatillon
Fort Regret
Belleray
Haudainville
Fort Dugny
Fort Haundainville
Fort Londrecourt
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8
BATTLE OF VERDUN
21 February 1916 - 16 December 1916
Fort
Battery
0
1km
5km

© Rocio Espin

1. Opening assault

The opening phase of the German Operation Gericht (sometimes translated as Operation 'judgement' or 'execution site'). The German III, V and XVIII Corps attacked French positions on the eastern bank of the Meuse. They advanced in small packets, often assisted by specialised assault teams armed with flamethrowers. Assault tactics – what might later be called 'stormtroop tactics' – were becoming more advanced by this stage of the war with both the French and Germans doing more to specialise the roles played by their infantry units.

2. Bois des Caures

The bois des Caures was one of a series of wooded areas that provided stiffer-than-expected resistance to the initial German assault. Wooded areas remained some of the most feared along the Western Front. They provided excellent cover for defenders, especially from artillery. Wooded areas could also be used to funnel attackers into pre-determined fields of fire where over-lapping machine gun posts would cut down attackers with enfilade fire. Emile Driant, parliamentarian and prolific author, died here commanding the 56th and 59th battalions of chasseurs à pied.

3. Brabant and Samogneux

The weight of the initial German assault fell further to the east of France, towards Haumont and Ornes. Nevertheless, the region around Brabant and Samogneux was critical. If the French fell apart here, their position on the right bank would become isolated, and potentially even encircled. The French forces with the river at their backs had no good avenue of escape, which greatly increased the likelihood that a minor defeat could turn into an ignominious rout.

4. Retaking Douaumont and Vaux

In October, General Nivelle launched the first of two counteroffensives designed to recapture lost ground and take advantage of the severe mauling German troops had suffered on the Somme since July. The French fired off a huge number of shells (over 800,000) in their preliminary bombardment. This sort of shell expenditure would die off in 1917 as it was simply too costly. In the end, both Douaumont and Vaux were taken easily. The Germans had in part abandoned the area before the attack went in; perhaps a foreshadowing of the Nivelle Offensive.

An aerial photo of Fort Douaumont taken by a German aircraft before the battle

5. Mort-Homme

After making substantial progress on the right bank in February, the German attack shifted towards the left bank in March. Normally, a salient would confer certain advantages to the defenders here, namely the advantage of interior lines. The geography (namely the river), however, actually put the French at a disadvantage when trying to fend off German attacks from multiple directions. French losses around Mort-Homme and Hill 304 were heavy.

6. Fort Souville

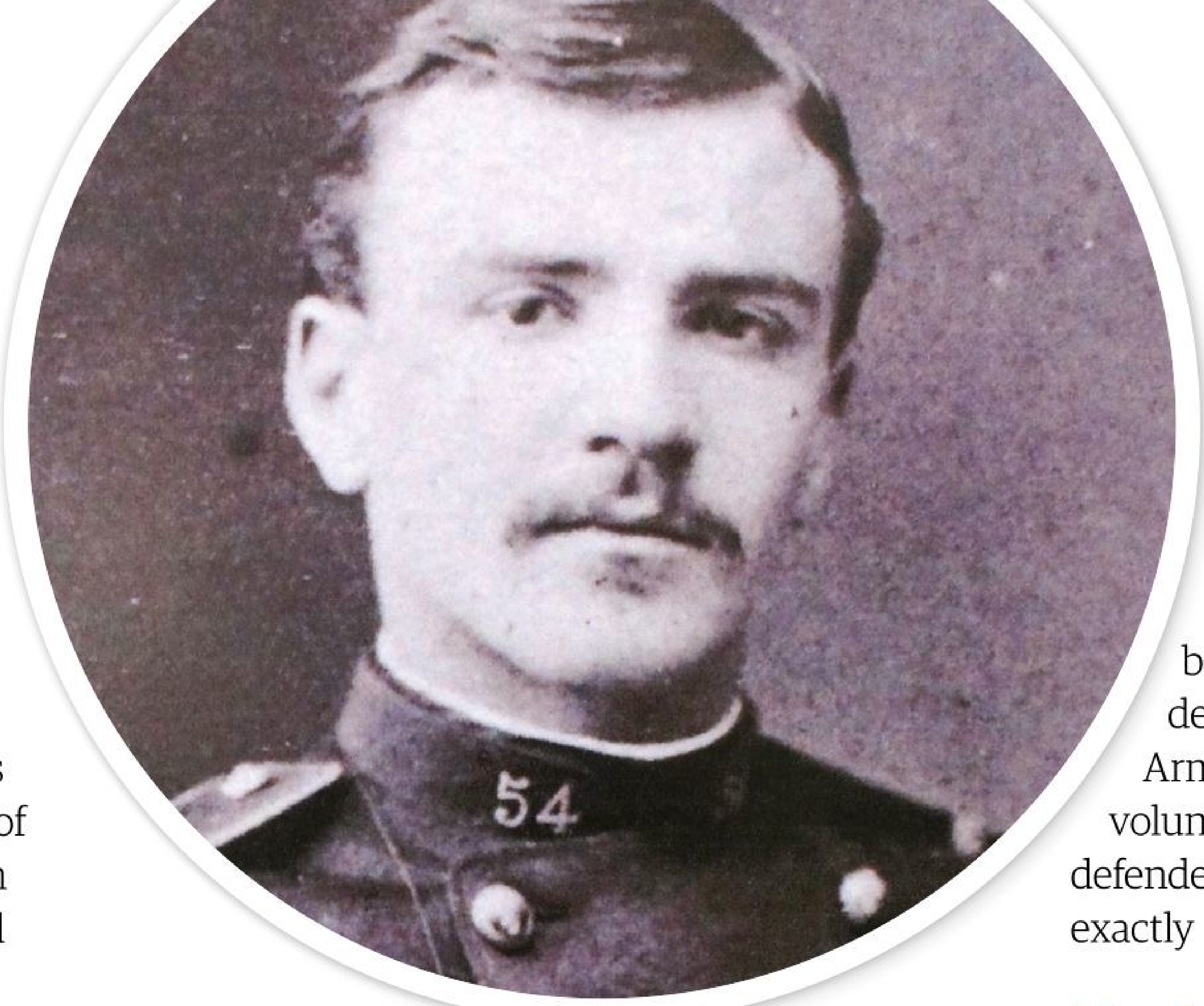
One of the 19 forts which made up the Fortified Region of Verdun, Fort Souville, wound up having an unexpected importance in July 1916. Despite the Battle of the Somme having begun on 1 July, some German units were still pressing forward in the Verdun sector. Had Souville fallen, it may have encouraged them to keep pushing, threatening to force the French defenders on the right bank of the Meuse into the river.

7. The Voie Sacrée

World War I was an industrial war, and required industrial quantities of materiel. Not just shells, but food, water, corrugated iron, sandbags, and reinforcements needed to arrive in a very timely fashion, and en masse, at the front when needed. Because of the layout of the battlefield the French had to move this great mass of manpower and materiel up a narrow road and rail-line coming up from Bar-le-Duc. This 'Sacred Way' was the only French lifeline for the majority of the battle.

8. Final December offensive

The last offensive of the battle of Verdun would again be led by General Mangin. Launched in the direction of Ornes, it recaptured a reasonable chunk of the ground lost to the Germans ten months earlier in the frantic days of late-February. The French fired over a million shells, inundating the area. Combined with the tired state of German forces by December 1916 this all but guaranteed a relatively easy French victory. The sheer number of German prisoners caught (roughly 11,000) is testament to the state of German forces in Verdun.



Left: Lieutenant Colonel Émile Driant saw the strategic value of Verdun and was against the removal of arms and men from the positions and forts in 1915

a further 45 men. The Germans had expected the bombardment to kill or incapacitate French defenders, allowing these small teams to effectively take their objectives unopposed.

Of course, some French defenders did survive. At several places the survivors were chasseurs à pied, elite infantry. Despite suffering heavy losses in the opening bombardment – often two thirds of the unit would have been lost before the German infantry even came into sight – their training and morale made them hold on and do everything in their power to slow up the German advance. This vicious defence meant that, despite the overwhelming bombardment on 21 February, the French managed to only lose the bois d'Haumont, and the first positions in the bois des Caures, bois le Comte, bois de Ville, and at L'Herbebois.

In the centre of the line, Colonel Emile Driant's own battalion of chasseurs à pied held on tenaciously in the bois des Caures. By nightfall on 22 February his battalion consisted of just 94 men, down from a theoretical full strength of over 750 rifles. Driant himself was killed on 22 February while evacuating his command post, which had been zeroed by German 77mm guns. Without the brave resilience of Driant and his chasseurs, the Germans would have poured right through the centre of the line.

The situation continued to deteriorate badly as the battle progressed. French artillery was pulled back, the village of Brabant was given up without a fight, and the 72e DI (infantry division) that was defending it pulled back towards Samogneux.

Morale began to sink so low that one senior officer in the 72e DI (Lieutenant Colonel Bernard) ordered a detachment of machine guns to be held in reserve at Samogneux to enforce, "the obedience of those who might forget their duty".

The wise retreat from Brabant – which would have quickly been encircled – infuriated senior commanders. General Chrétien, commanding XXX CA, ordered the 72e DI to retake the village, having been told by his superior, General Fernand de Langle de Cary, commander of the Centre Army Group, that no parcel of land was to be voluntarily given up. Instead, land was to be defended, "At any price… cost what it may." This is exactly what Falkenhayn was hoping for.

"Without the brave resilience of Driant and his chasseurs, the Germans would have poured right through the centre of the line"

Verdun under Pétain

Joseph Joffre, commander-in-chief of the French army, understood the seriousness of the situation and scrambled to keep Verdun from turning into a rout. The Germans continued to advance on the right bank of the Meuse, threatening to cut off French forces and roll up the flank of Verdun. Into this mess he hurled the Second Army, who had been in reserve, resting after its hard fight in Champagne a few months earlier.

Late on 24 February, Joffre called Second Army headquarters at Noailles and asked Pétain to come

The land around Fort Douaumont and Verdun was devastated by the battle

Adding a third dimension to the battlefield changed warfare forever

The war above the RFV

"We cannot hit what we cannot see" - paraphrase of General Emile Fayolle, 1915

Air power was a critical component of World War I. Above all else it was an extension of the artillery, the most important arm in the war. Before the Great War terrestrial observation usually provided enough information to prepare basic artillery bombardments and barrages. The sheer mass and depth of the fighting on the Western Front made this impractical.

The problems of coordinating mass artillery fire were compounded by the geographic advantages that the Germans maintained throughout the World War I. After the Battle of the Marne, the Germans had the luxury of retreating back to a defensive line running along just about every significant piece of high ground in northeastern France and Flanders. Air power became the only means for the Entente powers to actually see what they were firing at on the ground.

During Verdun it was essential for both sides. A mixture of fixed observation balloons and heavier-than-air platforms provided the detailed intelligence required to orchestrate the vast and complex artillery preparations both sides pursued in 1916. Pétain had long been interested in the utility of air power. As far back as spring 1915, he argued in favour of a perpetual mapping of the enemy's lines through aerial reconnaissance. He dreamed of a vast, coordinated map of the enemy trenches so as to quickly respond to any enemy movements or artillery action. Essentially, he was inventing a system that would not come into fruition until the 2003 invasion of Iraq and the advent of 'kill-boxes'!

> "Air power became the only means for the Entente powers to actually see what they were firing at"

The wreckage of a downed German bi-plane to his headquarters, GQG, at Chantilly. Pétain, however, was nowhere to be found. With his staff panicking, Pétain's long-time aide-de-camp, Serrigny, jumped into a staff car and raced off to Paris; he arrived at the Hôtel Terminus at the Gare du Nord Station at 3am. After arguing his way past the hotel manager, he eventually found himself outside of a hotel room staring at Pétain's boots resting in the hallway next to a pair of women's slippers. When Serrigny knocked on the door, Pétain answered, wearing "the scantiest of costumes", to learn that his army was being sent to Verdun. They were due to have an 8am meeting with Joffre, so once he had explained the situation, Serrigny got himself a room to sleep.

Pétain took command of the Verdun sector on 26 February at midnight and within hours he learned of the loss of Fort Douaumont. A small detachment of German troops had taken the fort by surprise without suffering any losses. The details of this loss were hidden from the public, who were instead told of a brave defence against insurmountable odds.

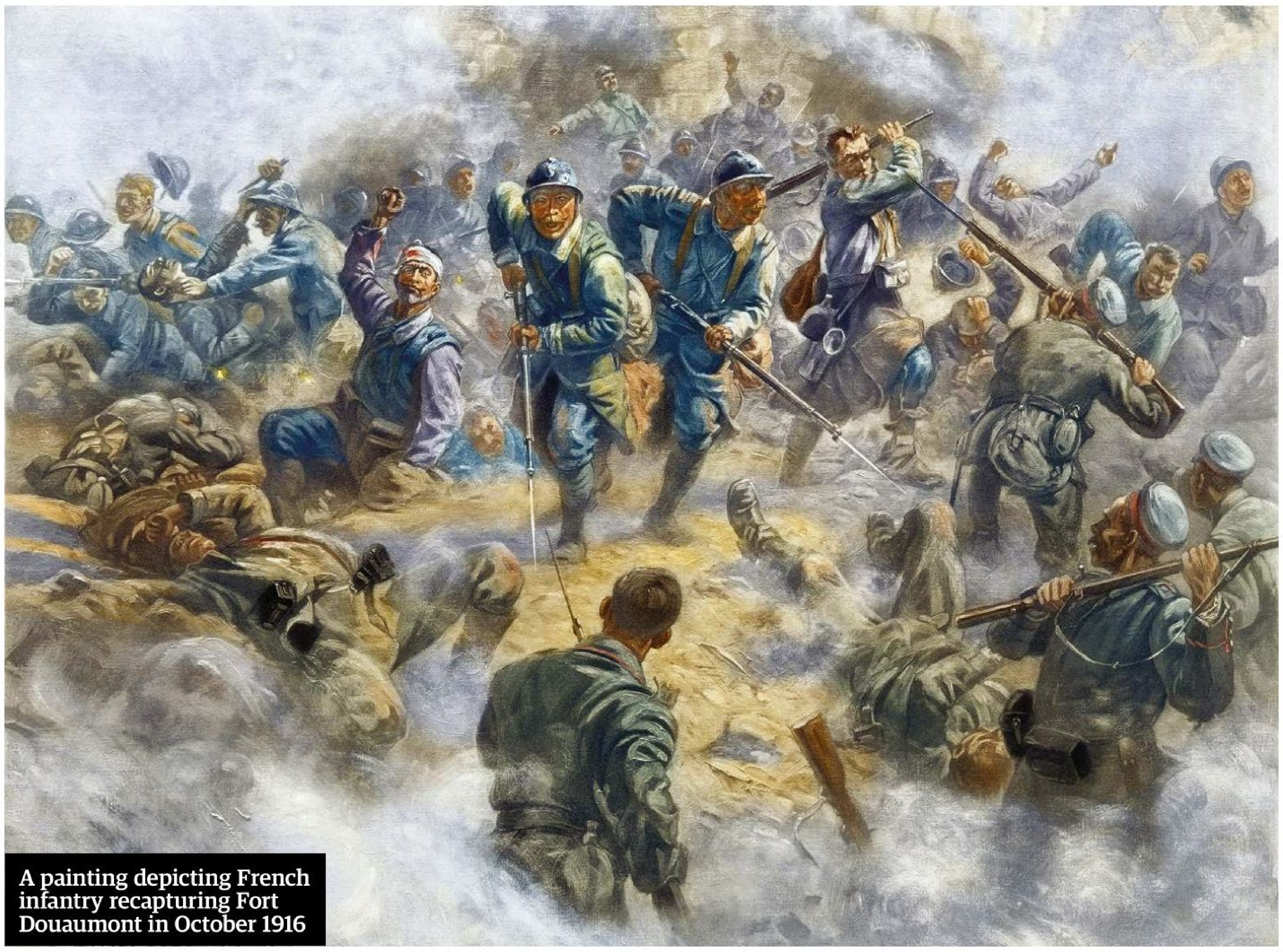
Undaunted, Pétain set about trying to repair the crumbling situation and paid especial attention to improving French logistics. Because Verdun was a salient, the French only had one real route into and out of the battlefield. This consisted of one light rail line and one road up from Bar-le-Duc, and made up the so-called Voie Sacrée, the 'Sacred Way', along which all of the men and materiel would have to travel. Before long, Pétain had the logistical network strengthened and running like clockwork. Over 4,000 lorries and ambulances would make a total of over 6,000 journeys up the Voie Sacrée each day. Vehicles traversed roughly a million miles each week transporting 90,000 men and 50,000 tonnes of supplies; at the height of the battle a lorry passed along the road every 14 seconds. It was a modern, automated, industrial system unlike any other at the time.

Combined with this logistical network, Pétain created what he called his 'Noria' system, which envisioned the Verdun battle and its logistical network as a great water wheel constantly taking water out of the battle and putting fresh resources in. Pétain made sure that men never had to spend more than a few days at the front. If they attacked, or were attacked, units would be immediately pulled out to rest. The general understood how crucially important it was to maintain the quality of his fighting divisions by not letting them be ground into dust.

The Germans, on the other hand, tended to leave units at the front for weeks at a time. The units lost their experienced soldiers and NCOs, making it more difficult for them to successfully integrate replacements. The heavy losses incurred also pushed morale to near the breaking point. Ironically, Pétain proved a much better attritional warrior than the Germans who started the battle with an expressly attritional model.

Pétain's reforms and refinements were important in shoring up the logistical and morale problems facing the French, but alone they could not do

A French soldier lies partially buried in the soil, a casualty of the tactics to 'bleed France white'



A painting depicting French infantry recapturing Fort Douaumont in October 1916

Left: Believing that the Verdun fortifications could not stand up to modern artillery fire, Joffre ordered that they be stripped to strengthen other positions on the Western Front

much to stem the tide of German forces consistently making ground against ever-weaker French defenders. By 24 February, the French were down to just 86 heavy guns in the Verdun sector. The infantry was disorganised when Pétain arrived and all but incapable of defending themselves. The only thing that saved them in those critical early days was the German need to move their artillery forward, reorganise the trenches they had already conquered, and extend their lines of supply. Simple Clausewitzian friction saved the French in the opening phase of the battle.

By the end of February the battle on the right (east) bank of the Meuse had slowed to a crawl, leading the Germans to change their axis of attack and begin striking French positions on the left bank. On 2 March, the Germans opened up with a stunning bombardment to rival that unleashed on 21 February. The first major infantry attack on the left (west) bank went in on 6 March, supported by fire from a German armoured train – their goal was the position of Mort-Homme.

The French responded with a furious counter-barrage, which should have substantially broken up the cohesion of the German attack and given French defenders a chance to hold on. In this instance over 10,000 French shells fell into marshy land and failed to detonate, allowing the Germans to advance, maintaining much of their strength.

The commander of the sector General Georges de Bazelaire responded by ordering every French unit to immediately retreat upon being attacked, regardless of the circumstances. At that point, maintaining morale and manpower was the only thing that mattered: the ground was already lost. Nevertheless, the 67e DI managed to lose 3,000 men over the course of 6-7 March. Because the French were now more prepared for German attacks, they were able to launch a counterattack the following day. At 7am, two battalions under Colonel Macker of the 92e RI attacked and retook two-thirds of the ground lost the previous day in and around the bois des Corbeaux in 20 minutes. Colonel Macker had run out of water by this point, and so led the attack with a flask of cheap wine, his cane in his hand, and a cigar in his mouth: the epitome of a French officer of World War I.

All the while Pétain grew increasingly worried that his battered position would break, and urged Joffre to launch the Somme battle as soon as possible. Beginning to get worried himself, Joffre visited the Verdun front on 10 April 1916, the same day that Pétain issued his famous order: 'Courage. On les aura!' ('We'll get 'em!'). Joffre had grown weary of Pétain's incessant requests of resupply and reinforcement and hoped to reignite an offensive spirit in the general.

It was during this trip that Joffre first saw General Robert Nivelle – the man who would succeed him as commander-in-chief – lead men in combat. Nivelle was wedded to the attack, and maintained a vigorous posture whenever possible. Even though his attacks were costly, and won no real strategic advantage, they caught Joffre's eye. Soon after this visit Joffre promoted Pétain, making him commander of the Centre Army Group, and promoted Nivelle to the head of Pétain's Second Army. This gave him tactical control of the battle from 26 April until its end in December. Pétain's critical leadership of the Battle of Verdun had lasted only two months.

As the months passed, the battle carried on along similar lines: attack and counterattack, with

German troops pick their way past the fallen enemy. By the spring of 1916 the German advance was grinding to a halt

> “Colonel Macker had run out of water by this point, and so led the attack with a flask of cheap wine, his cane in his hand, and a cigar in his mouth”

small areas of ground exchanging hands repeatedly, but on the whole tending to fall more and more into German possession.

The Germans crept closer to Verdun, eating up French manpower by the thousands. The strategic reserve that Joffre had hoped to use in a Franco-British attack astride the Somme river was chewed up in the Meuse Mill. Whereas Joffre and Foch’s initial plan called for 40 French divisions to attack alongside the British on the Somme, the losses suffered at Verdun would mean that only 12 would go over the top on 1 July 1916.

Despite the small numbers, they managed to captured all of their objectives at the cost of only 1,560 casualties, a rather different experience compared to the well-known debacle of the British on the same day.

The counterattacks

German pressure ebbed and flowed in the Verdun sector until July. Within a fortnight of the Somme offensive beginning, German attacks all but ceased. Whatever reserves the Germans had in the area were quickly shuttled north to protect and defend themselves against the French and British attacks in Picardy. Even before then, Nivelle had launched a series of counterattacks against the German army. In late-May he ordered General Mangin to recapture Fort Douaumont.

Despite Mangin’s blind confidence in his ability to retake the fort – and despite excellent French efforts to assert control of the air, with six of the eight German observation balloons taken out – the attack was a disaster. The artillery preparation had been cut from five days to a little over two to save artillery shells for the Somme. The intense German counter-bombardment meant that French units were severely depleted before they even went over the top. Some of the lead companies – the 129e RI, for example – were down to only 45 men. On 22 May, at 11.50am, the attack went in anyway. By 12pm it had utterly failed.

Under Nivelle the French would eventually retake both forts Vaux and Douaumont, the latter on 24 October 1916. This was hugely important for French morale and helped capstone the French army’s long and arduous trial along the banks of the Meuse.

In strictly military terms, however, Douaumont’s recapture was probably not terribly important. The Germans had already been pulling out of the sector – Vaux was recaptured without a fight – and the battle had long before descended into a series of brief, isolated engagements followed by long periods of quiet. After the failure to capture Fort Souville in July, the Germans did not make any more serious offensives in the sector.

The French counteroffensives largely occurred in late-October and early-November with a brief flare-up in the middle of December. Long gone were the hectic days of February to July, but nevertheless, this final phase is just as important.

Despite capturing only a few objectives of dubious military value, and at a high cost in casualties and munitions, Nivelle’s recasting of Verdun as an offensive, rather than defensive, battle won him substantial praise.

Ultimately, it paved the way for his succession of Joffre as command-in-chief in December 1916. The path then would lead inexorably to the disastrous Nivelle Offensive of April 1917 and the French mutinies that followed. It was a final dark reminder of the burden borne by French soldiers along the banks of the Meuse in 1916.

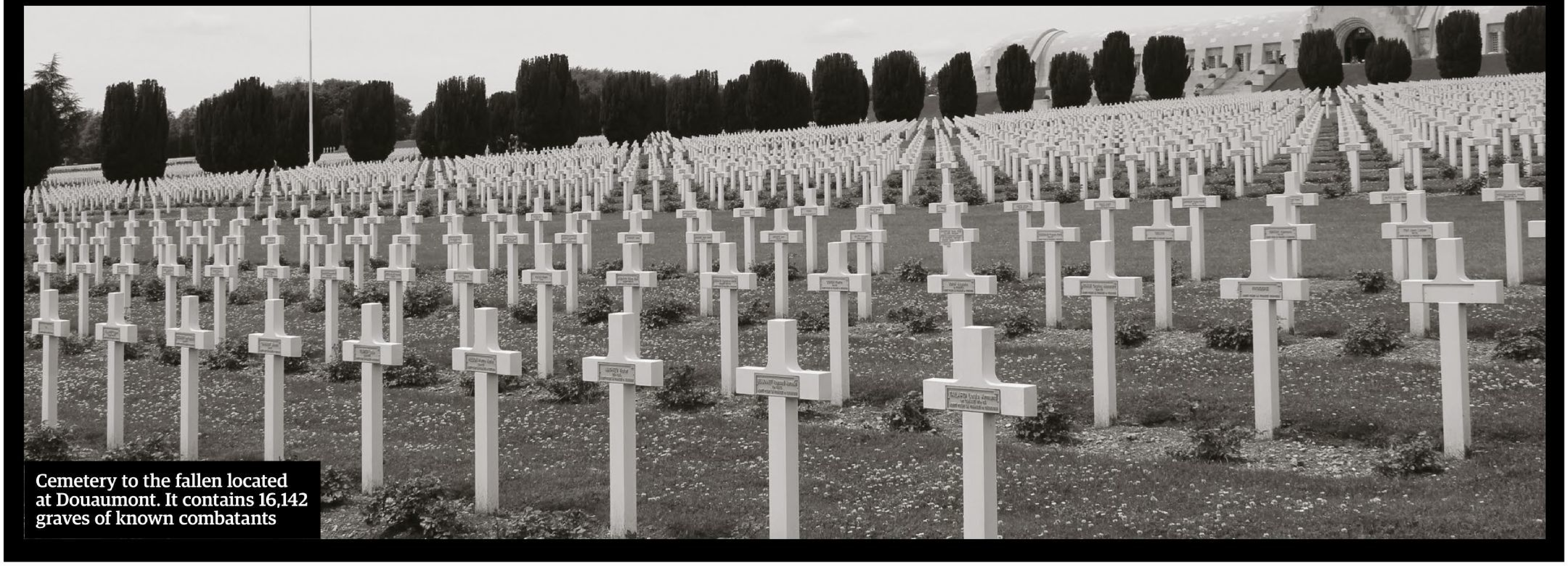
Counting the cost

French and German losses were nearly identical at Verdun. So, who won?

During the Battle of Verdun, both the French and German armies lost around 350,000 casualties each, with the exact numbers still in contention. These figures sound shocking, but in reality it was only half as bad as the Somme, which saw roughly 600,000 casualties on either side. So, why does Verdun stick in our minds?

In part, this is owing to the horrific conditions in the Verdun salient, which were really archetypal for World War I: a true moonscape, complete with mud, blood, the dead and the dying. The sense of endless carnage for no real strategic gain (or loss) stuck in the minds of soldiers very early on. It was here at Verdun that French soldiers were first heard bleating like sheep being led to the slaughter as they marched towards the sound of the guns. Pétain’s ‘Noria’ system helped to reduce the stress and strain that his men experienced while operating in the Verdun sector.

Ultimately, there was only so much he could do to lessen the stress of suffering heavy casualties often in very short periods of time. On occasion, some units were being all but wiped out in a matter of days. What did these 700,000 Verdun casualties mean? Following the battle, the Allies launched major attacks on the Somme, in Galicia (the Brusilov Offensive) and in Italy. On the Western Front alone Germany had fewer than 1.2 million casualties (nearly as many as they had lost in 1914 and 1915 combined). In the second half of 1916 the Germans lost 26 per cent of their forces on the Western Front, and a further 15 per cent of the forces they had on the Eastern Front. The losses were staggering. In the brutal game of attrition, Germany was simply outnumbered and could not afford to lose simply equal numbers of men in battles against the powers of Britain, France and Russia.



Cemetery to the fallen located at Douaumont. It contains 16,142 graves of known combatants

© Alamy, Getty, TopFoto

Battle of Jutland

31 May 1916

After years of building up battleships to dominate the oceans, the British and German navies finally came to blows in the North Sea

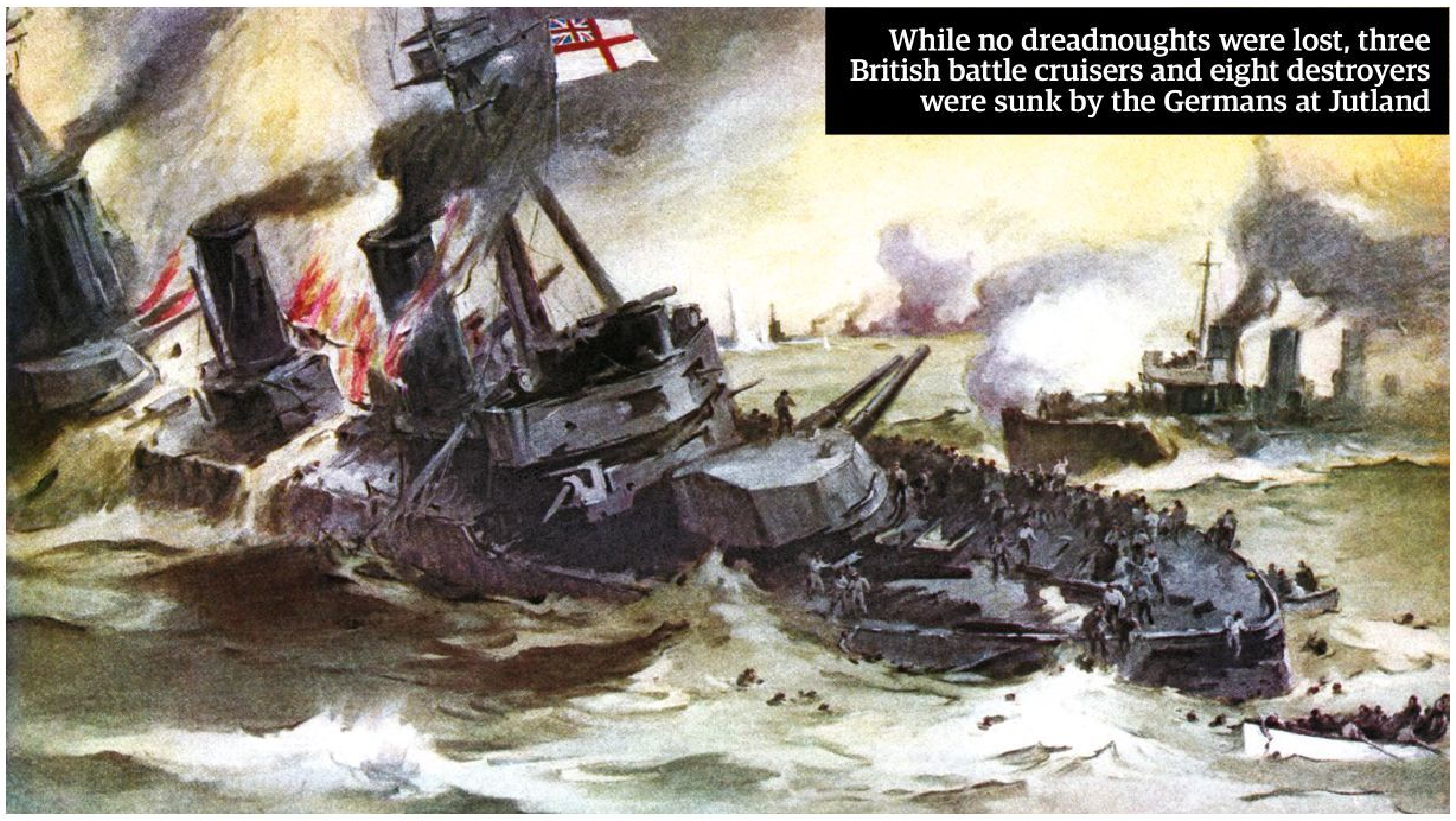
In early 1916, the North Sea was far from the battleground it would become, as the Royal Navy continued its blockade of the Imperial German Navy. Admiral Reinhardt von Scheer's appointment that year changed things as he ordered his ships to break out against the British barricade. Across the water, the British had grown tired of months spent skirmishing with German vessels, and were already mobilising in response. The Royal Navy's Grand Fleet would finally face off against the German High Seas Fleet, as the results of the long arms race finally came to fruition.

> "The British grew tired of month skirmishing with German vessels and mobilised a response"

The navies of Jutland

the strength of the two navies at WWI's defining sea conflict

	British grand fleet	German high seas fleet
Dreadnoughts	28	16
Pre-Dreadnoughts	0	6
Battle Cruisers	9	5
Light Cruisers	26	11
Destroyers	77	61
Armoured Cruisers	8	0
Seaplane Carriers	1	0
Minelayers	1	0



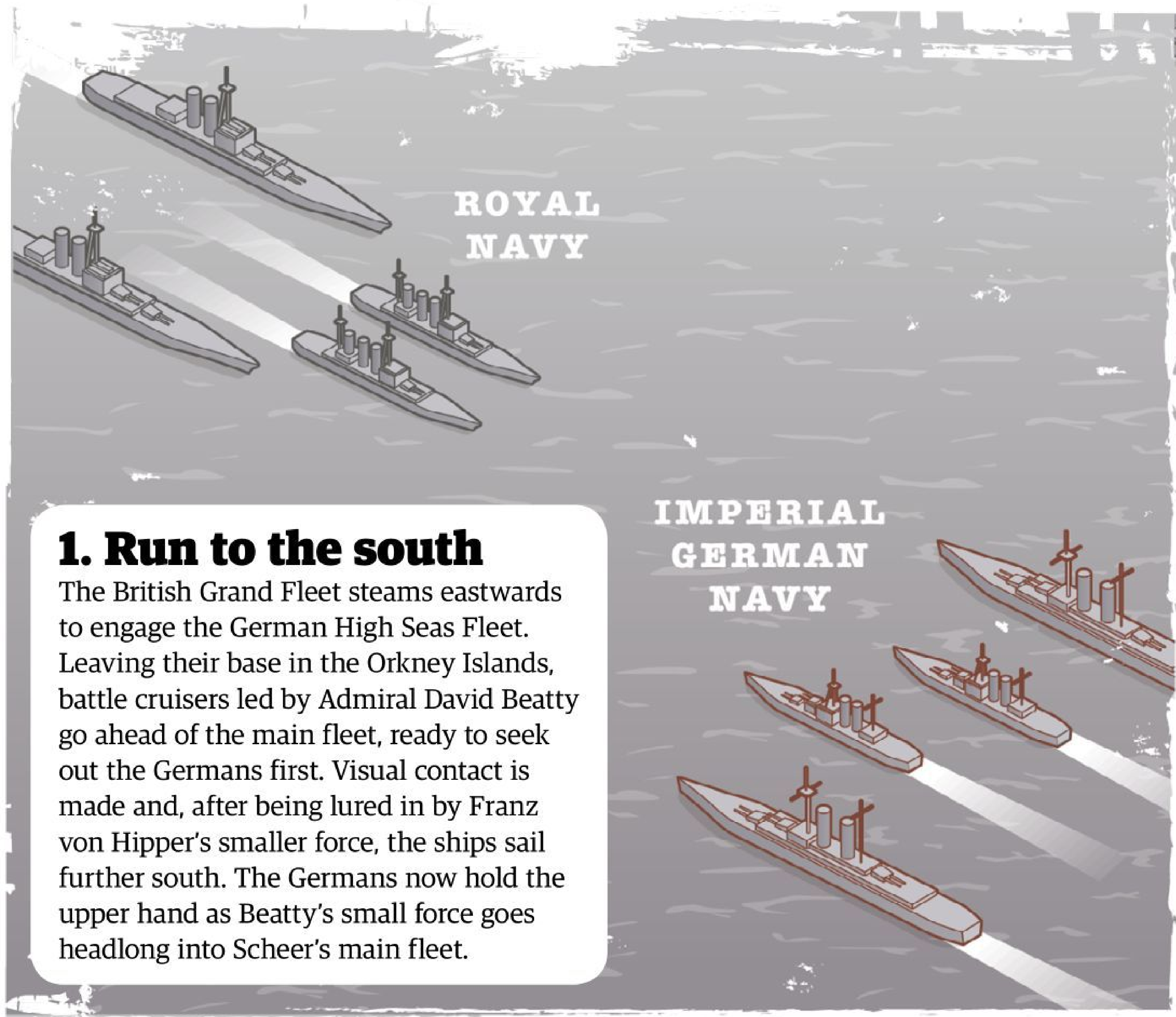
While no dreadnoughts were lost, three British battle cruisers and eight destroyers were sunk by the Germans at Jutland

Jutland: the aftermath

How the end of the arms race produced bittersweet victory

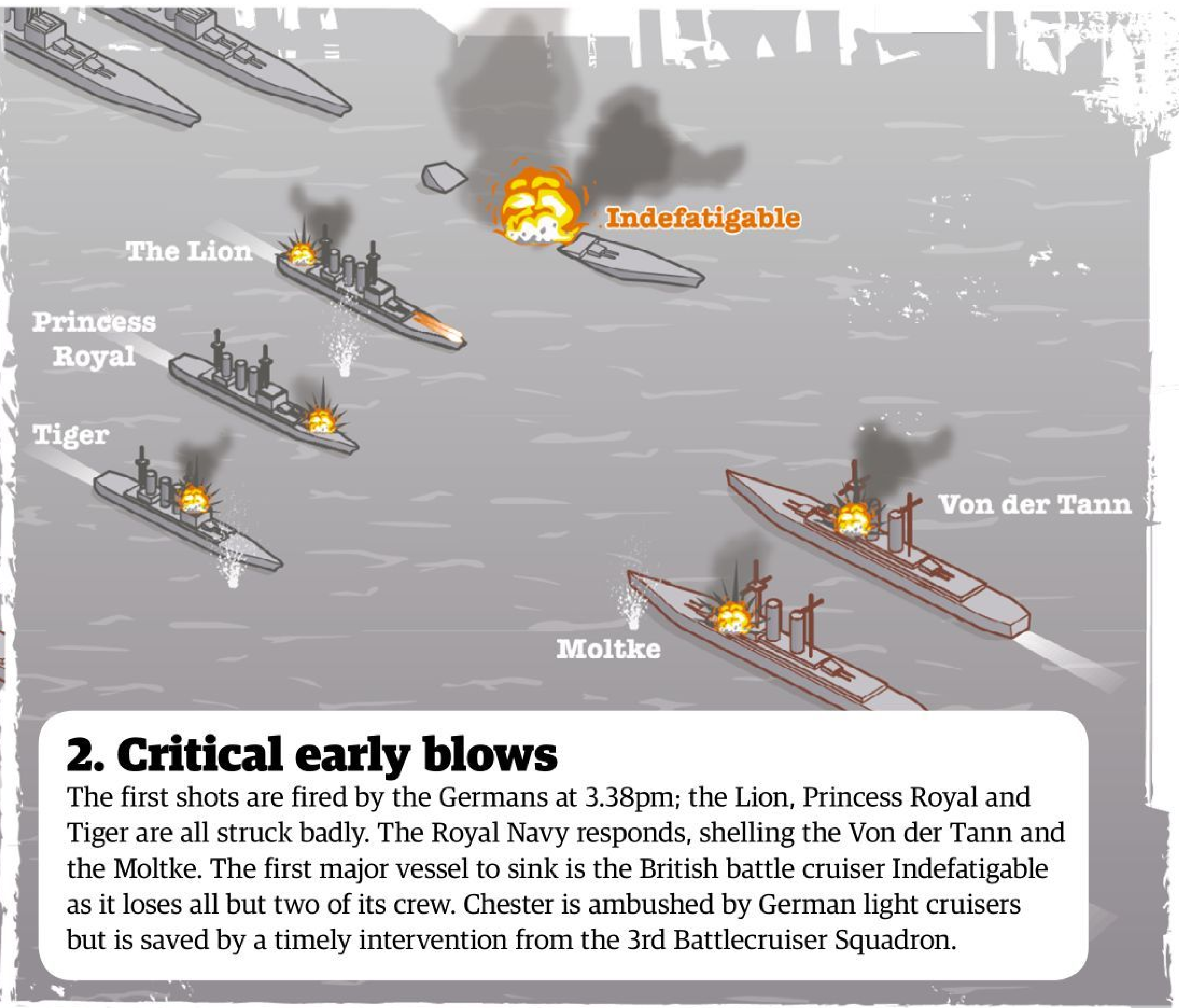
For two very proud nations, the loss of ships was hard to take. Although no dreadnoughts were sunk, many destroyers and battle cruisers were lost by both navies, with Britain recording more casualties. Despite losing more vessels and manpower, the German retreat meant the Royal Navy now had undisputed control of the North Sea, but the lack of a stunning victory was not lost on the British public, who were expecting a success of Trafalgar proportions. The inconclusive result of the battle was disappointing to the military hierarchy as well, as it was hoped that these metal leviathans could turn the tide of the war.

Admiral Jellicoe was criticised by Churchill for not taking a riskier approach and it is true that if he hadn't feared a torpedo attack to such an extent, he could have knocked the German Navy out of the war at Jutland. However, this takes away from the key manoeuvres and tactics that Jellicoe exercised prior to this moment. So soon after one of the largest arms races of all time, the role of battleships had changed and the age of the submarines and aircraft carriers was about to begin.



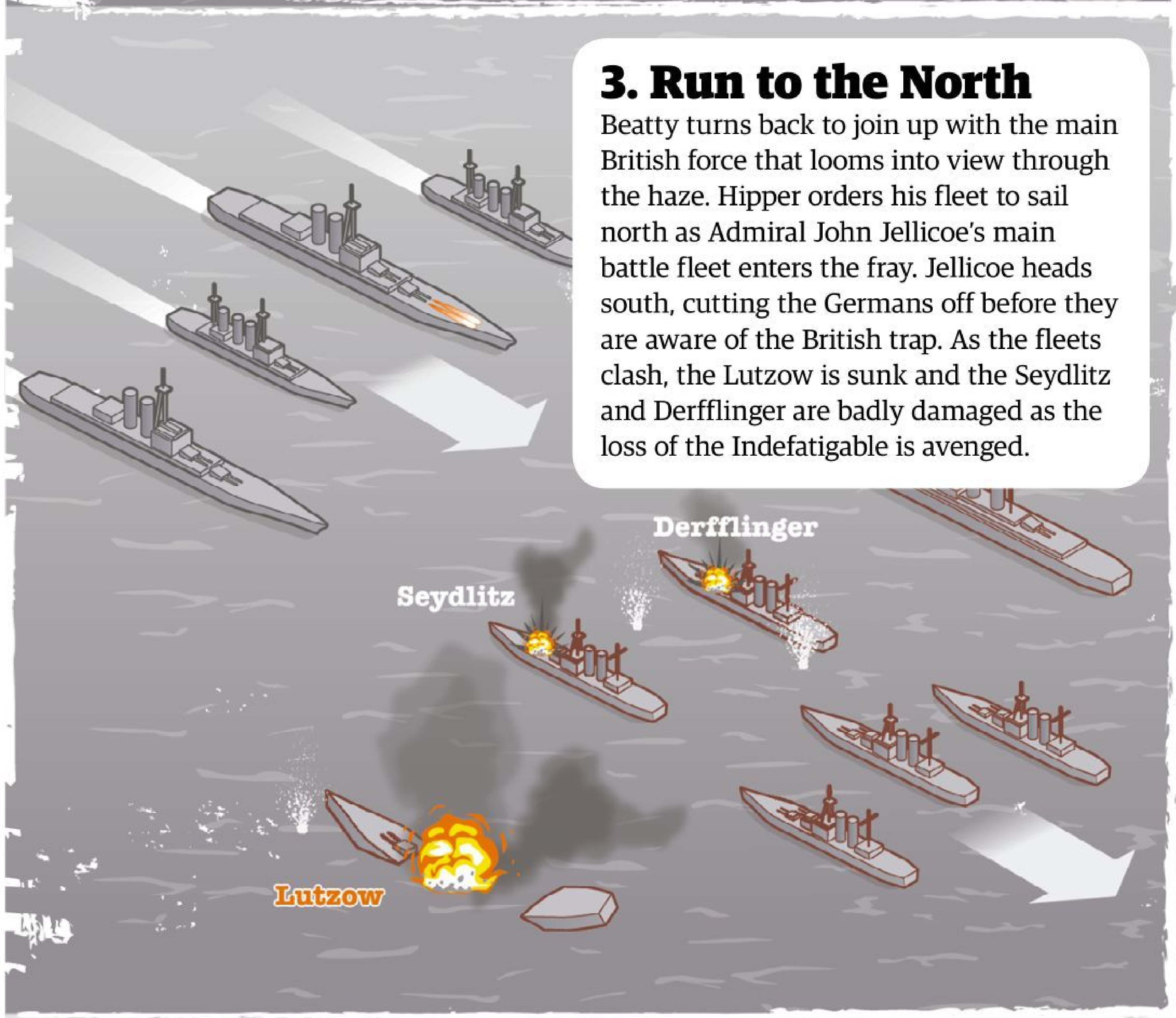
1. Run to the south

The British Grand Fleet steams eastwards to engage the German High Seas Fleet. Leaving their base in the Orkney Islands, battle cruisers led by Admiral David Beatty go ahead of the main fleet, ready to seek out the Germans first. Visual contact is made and, after being lured in by Franz von Hipper's smaller force, the ships sail further south. The Germans now hold the upper hand as Beatty's small force goes headlong into Scheer's main fleet.



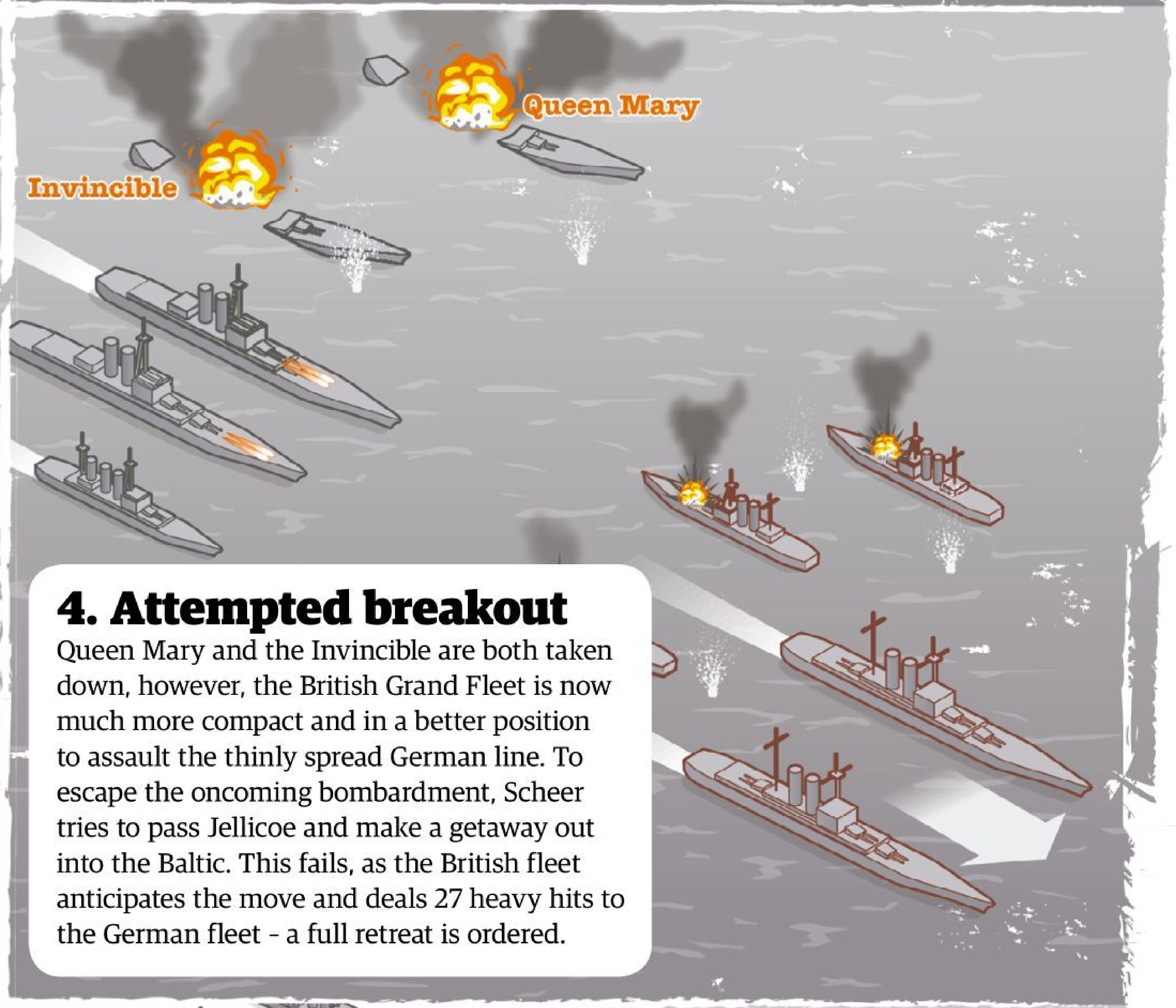
2. Critical early blows

The first shots are fired by the Germans at 3.38pm; the Lion, Princess Royal and Tiger are all struck badly. The Royal Navy responds, shelling the Von der Tann and the Moltke. The first major vessel to sink is the British battle cruiser Indefatigable as it loses all but two of its crew. Chester is ambushed by German light cruisers but is saved by a timely intervention from the 3rd Battlecruiser Squadron.



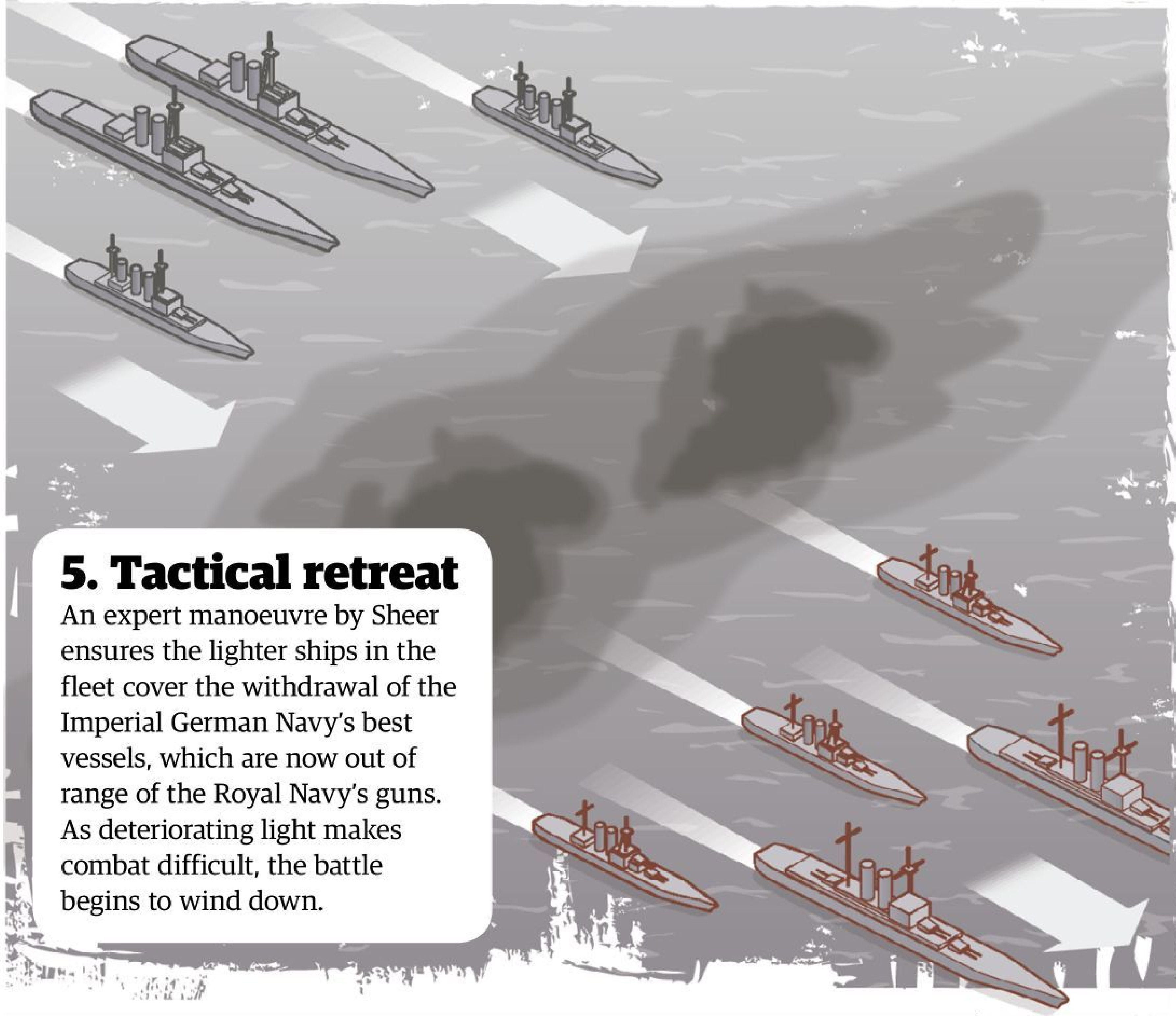
3. Run to the North

Beatty turns back to join up with the main British force that looms into view through the haze. Hipper orders his fleet to sail north as Admiral John Jellicoe's main battle fleet enters the fray. Jellicoe heads south, cutting the Germans off before they are aware of the British trap. As the fleets clash, the Lutzow is sunk and the Seydlitz and Derfflinger are badly damaged as the loss of the Indefatigable is avenged.



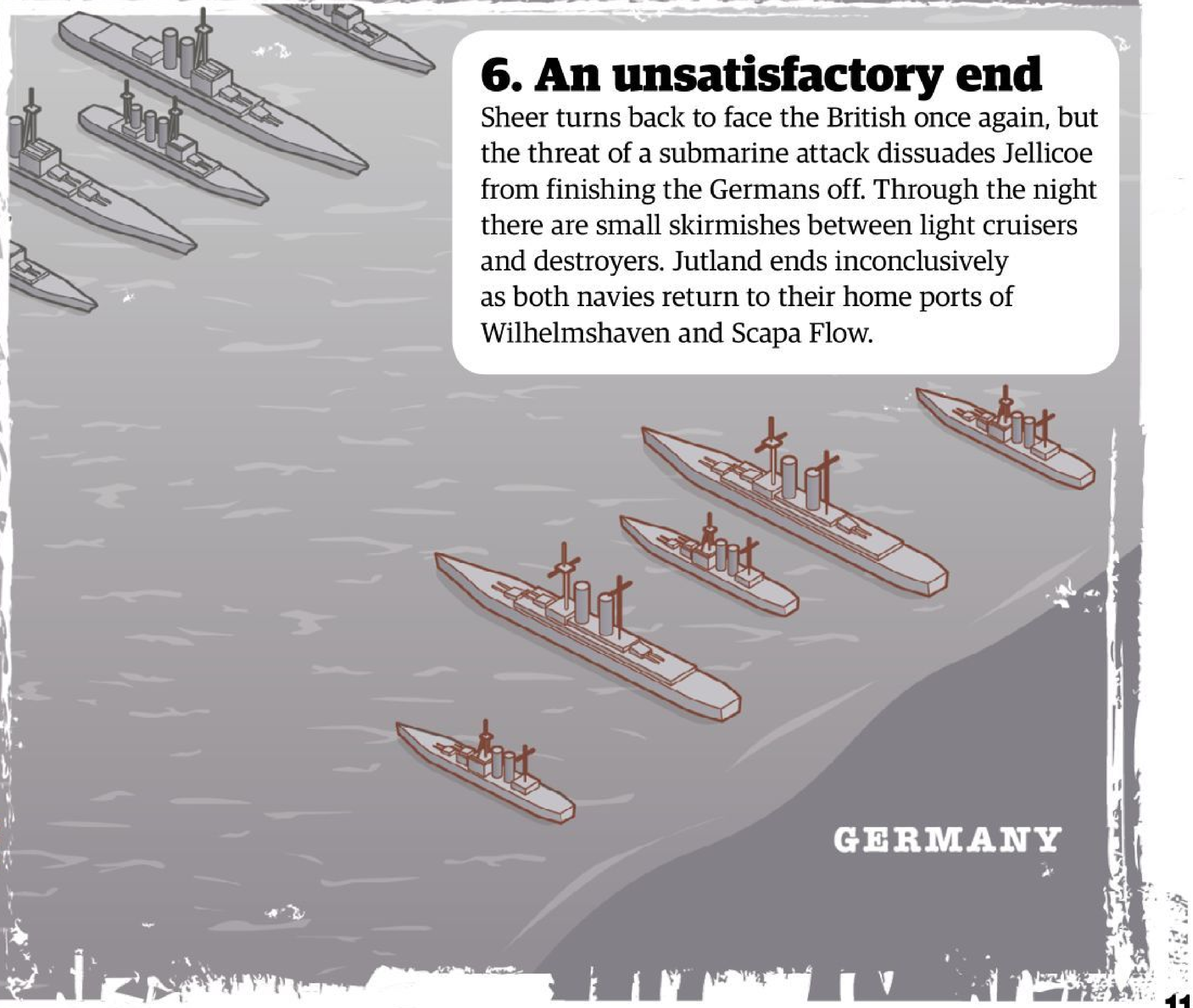
4. Attempted breakout

Queen Mary and the Invincible are both taken down, however, the British Grand Fleet is now much more compact and in a better position to assault the thinly spread German line. To escape the oncoming bombardment, Scheer tries to pass Jellicoe and make a getaway out into the Baltic. This fails, as the British fleet anticipates the move and deals 27 heavy hits to the German fleet - a full retreat is ordered.



5. Tactical retreat

An expert manoeuvre by Sheer ensures the lighter ships in the fleet cover the withdrawal of the Imperial German Navy's best vessels, which are now out of range of the Royal Navy's guns. As deteriorating light makes combat difficult, the battle begins to wind down.



6. An unsatisfactory end

Sheer turns back to face the British once again, but the threat of a submarine attack dissuades Jellicoe from finishing the Germans off. Through the night there are small skirmishes between light cruisers and destroyers. Jutland ends inconclusively as both navies return to their home ports of Wilhelmshaven and Scapa Flow.

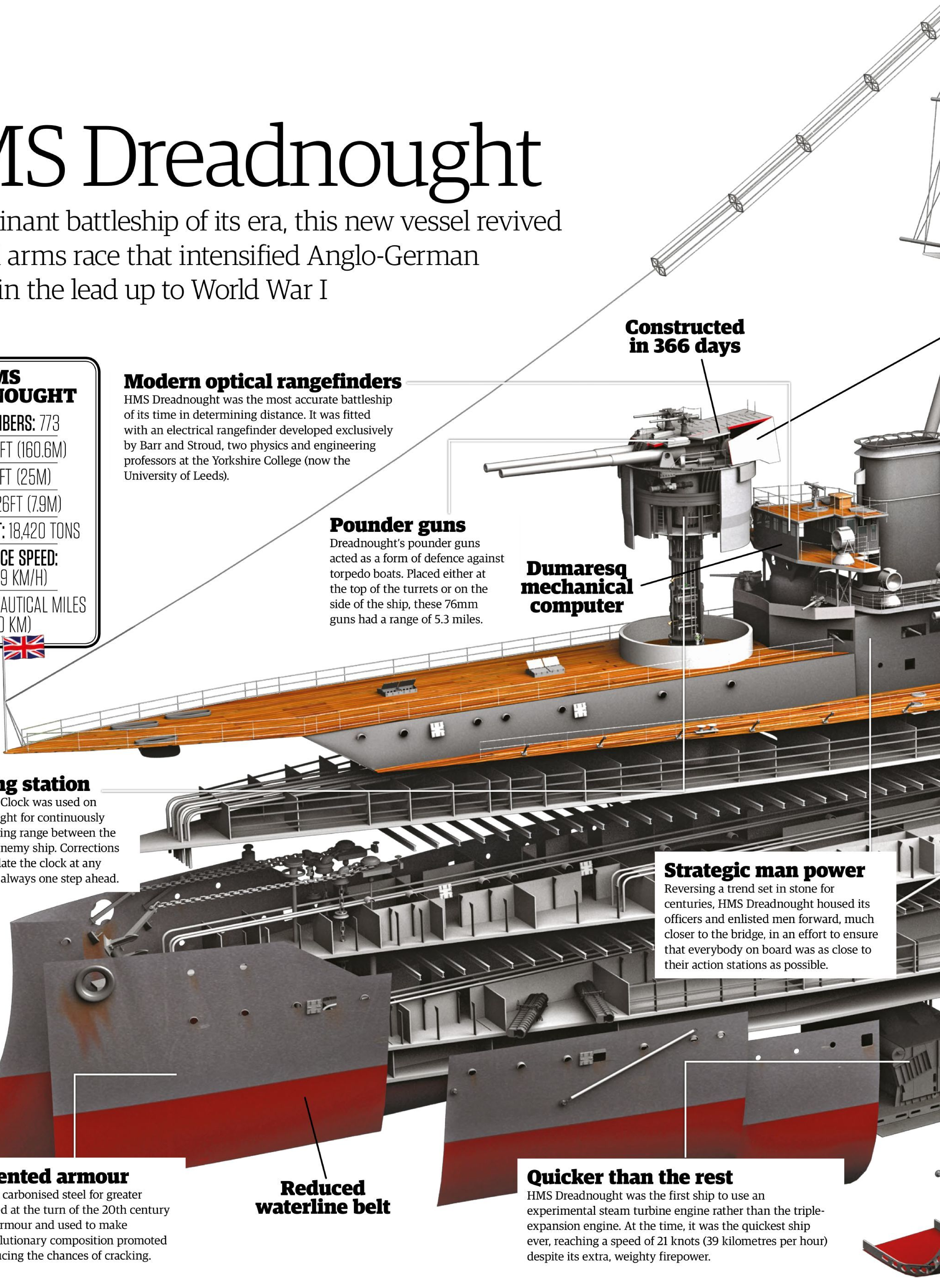
© Illustration: Acute Graphics

HMS Dreadnought

The dominant battleship of its era, this new vessel revived the naval arms race that intensified Anglo-German tensions in the lead up to World War I

HMS DREADNOUGHT

CREW MEMBERS: 773
LENGTH: 527FT (160.6M)
BEAM: 82FT (25M)
DRAUGHT: 26FT (7.9M)
DISPLACEMENT: 18,420 TONS
TOP SURFACE SPEED: 21 KTS (39 KM/H)
RANGE: 6,620 NAUTICAL MILES (12,260 KM)



Constructed in 366 days

Modern optical rangefinders

HMS Dreadnought was the most accurate battleship of its time in determining distance. It was fitted with an electrical rangefinder developed exclusively by Barr and Stroud, two physics and engineering professors at the Yorkshire College (now the University of Leeds).

Pounder guns

Dreadnought's pounder guns acted as a form of defence against torpedo boats. Placed either at the top of the turrets or on the side of the ship, these 76mm guns had a range of 5.3 miles.

Dumaresq mechanical computer

Transmitting station

A new Vickers Range Clock was used on board HMS Dreadnought for continuously calculating the changing range between the target vessel and an enemy ship. Corrections could be made to update the clock at any time, so the ship was always one step ahead.

Strategic man power

Reversing a trend set in stone for centuries, HMS Dreadnought housed its officers and enlisted men forward, much closer to the bridge, in an effort to ensure that everybody on board was as close to their action stations as possible.

Krupp cemented armour

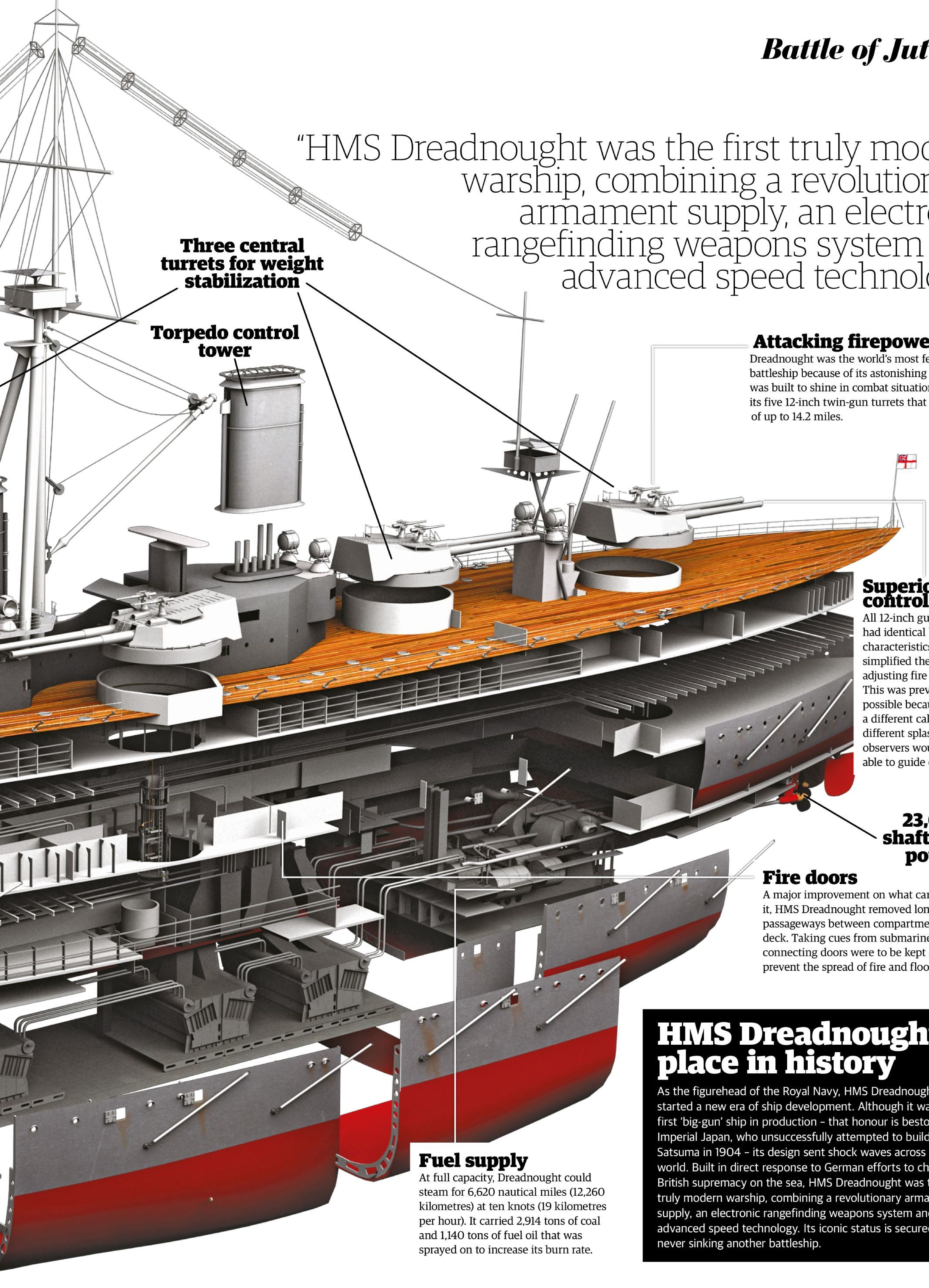
Krupp armour, which carbonised steel for greater hardness, was replaced at the turn of the 20th century by Krupp cemented armour and used to make Dreadnought. Its revolutionary composition promoted greater elasticity, reducing the chances of cracking.

Reduced waterline belt

Quicker than the rest

HMS Dreadnought was the first ship to use an experimental steam turbine engine rather than the triple-expansion engine. At the time, it was the quickest ship ever, reaching a speed of 21 knots (39 kilometres per hour) despite its extra, weighty firepower.

> “HMS Dreadnought was the first truly modern warship, combining a revolutionary armament supply, an electronic rangefinding weapons system and advanced speed technology”



Attacking firepower

Dreadnought was the world’s most feared battleship because of its astonishing firepower. It was built to shine in combat situations thanks to its five 12-inch twin-gun turrets that had a range of up to 14.2 miles.

Superior fire control

All 12-inch guns on board had identical ballistic characteristics, which simplified the task of adjusting fire in battle. This was previously not possible because guns of a different calibre created different splashes and observers would not be able to guide effectively.

Fire doors

A major improvement on what came before it, HMS Dreadnought removed longitudinal passageways between compartments below deck. Taking cues from submarines, the ship’s connecting doors were to be kept shut to prevent the spread of fire and flooding.

Fuel supply

At full capacity, Dreadnought could steam for 6,620 nautical miles (12,260 kilometres) at ten knots (19 kilometres per hour). It carried 2,914 tons of coal and 1,140 tons of fuel oil that was sprayed on to increase its burn rate.

HMS Dreadnought’s place in history

As the figurehead of the Royal Navy, HMS Dreadnought kick-started a new era of ship development. Although it wasn’t the first ‘big-gun’ ship in production – that honour is bestowed on Imperial Japan, who unsuccessfully attempted to build the IJN Satsuma in 1904 – its design sent shock waves across the naval world. Built in direct response to German efforts to challenge British supremacy on the sea, HMS Dreadnought was the first truly modern warship, combining a revolutionary armament supply, an electronic rangefinding weapons system and advanced speed technology. Its iconic status is secured despite never sinking another battleship.

© Illustration: Alex Pang

Royal Navy vs Imperial German Navy

The two greatest naval powers of the era were both determined to come out on top in the battle on the high seas

The Royal Navy

Ships

Germany may have been the plucky underdog, but the British Grand Fleet always had its nose ahead throughout the arms race, both in quality and quantity of ships.

★

Leaders

Richard Burdon Haldane was one of the major players in the British war effort but failed to improve relations with the Germans, regularly losing out to Tirpitz in deals and pacts.

Manpower

Some accounts suggest that British sailors had the initiative trained out of them, but the years of Britannia ruling the waves resulted in legions of experienced sailors.

Ports

A rich naval heritage meant that Britain had numerous ports at its disposal, from Liverpool and Portsmouth in England to Scapa Flow in the Orkney Islands.

★

Allies

The French and the Russian navies were vital in the war effort in the Mediterranean and the Baltic respectively. The US entered too late to have any decisive naval contributions.

★

Total

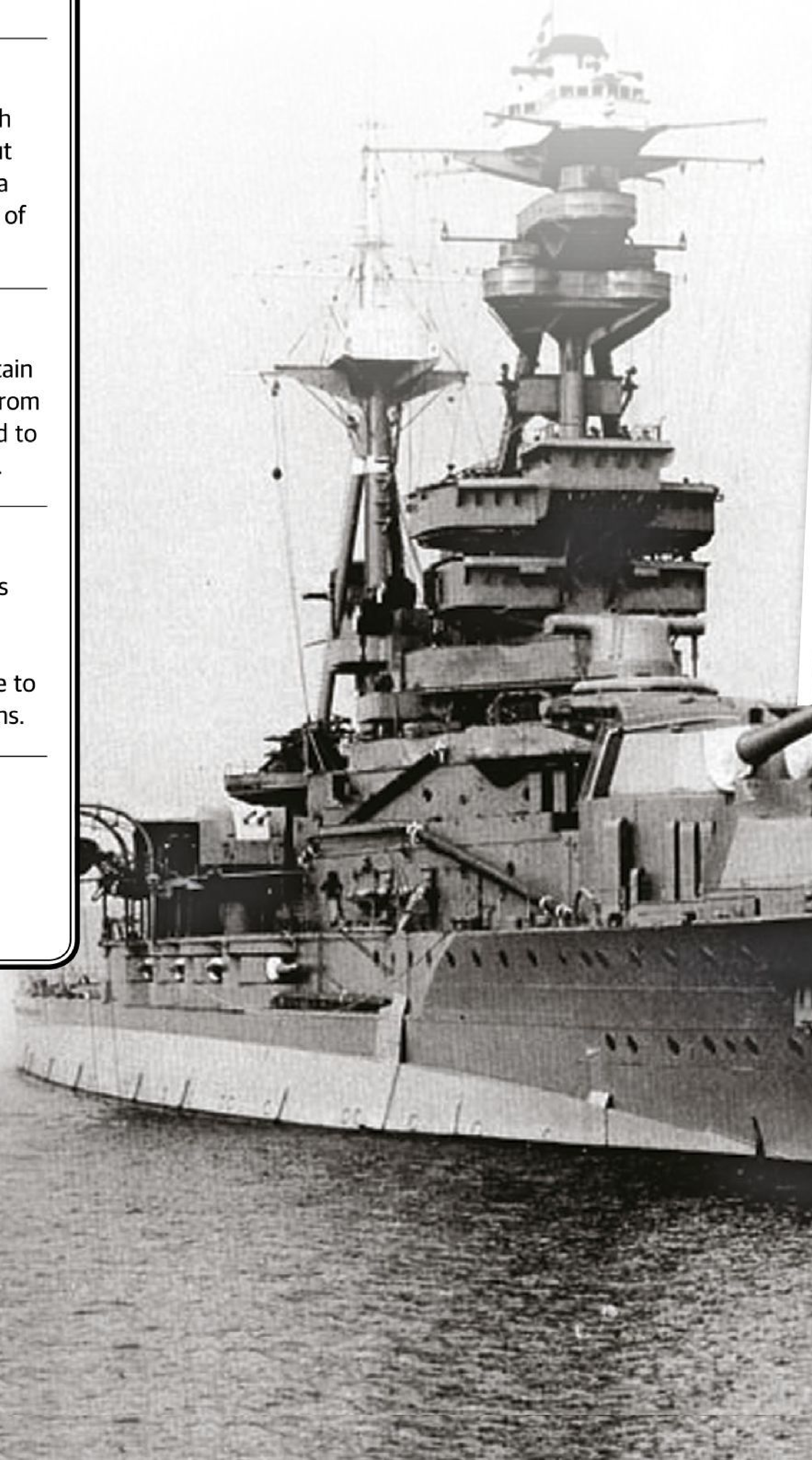
★★★

The beginning of the end for Pax Britannica

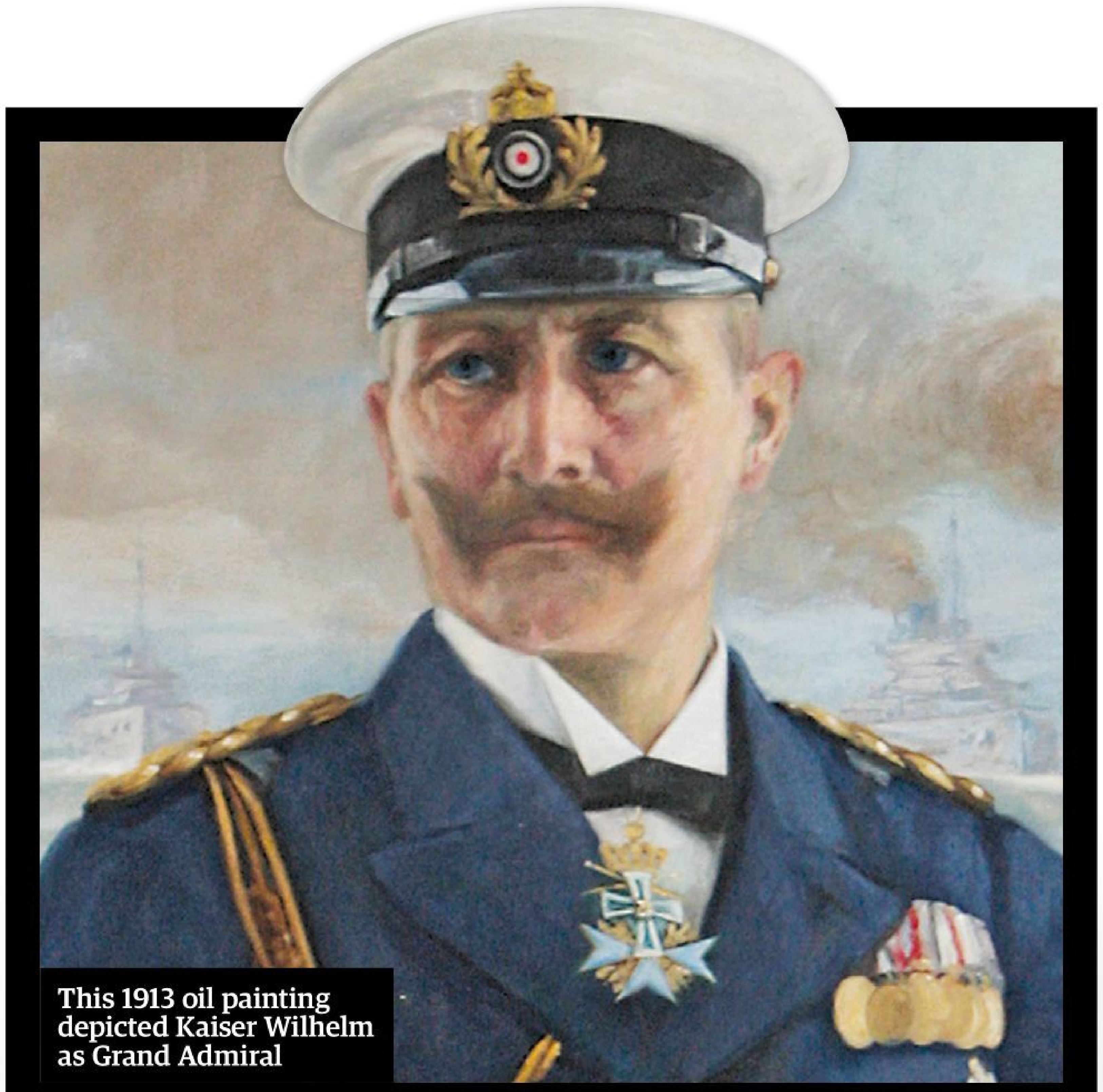
By the tail-end of the 19th century, Britain was the most technologically advanced nation on Earth. However, the empire was becoming more and more of a financial and military burden, with British forces thinly spread over its borders. What Britain still had was a strong navy. Wary of unified Germany's new-found industrial might, naval funding was increased and the drive to stay on top was at hand. With huge backing from the British public, the harbour furnaces were lit and the road to a new naval supremacy began.

Battleships line up for the 1909 King's Review of the Home Fleet and the Atlantic Fleet at Spithead

As secretary of war, Richard Burdon Haldane visited Berlin in 1912 to explore the possibility of an arms control agreement



HMS Royal Oak, one of five Revenge-class battleships built during WWI



This 1913 oil painting depicted Kaiser Wilhelm as Grand Admiral

From Realpolitik to Weltpolitik

Paranoid by a fear of encirclement and driven by a desire to compete with the world's elite nations, Germany was hungry for more military power. The era of Bismarck was over and Kaiser Wilhelm began to pioneer the idea of Weltpolitik, believing that an all-powerful High Seas Fleet would be the best way to realise his grand imperial ambitions. Germany was a young nation, barely 50 years old, and these assertive aspirations would send shock waves through Britain, Russia and France, who were compelled to respond.

The Imperial German Navy

Ships

Despite Germany's best efforts, Britain's geographical location meant that it could always delegate more of its resources to naval production, which was imperative to its survival as a military power.

Leaders

In the Anglo-German rivalry, Germany held all the cards and the likes of Tirpitz and Bülow continuously prevented British efforts to reduce the size of the German fleet.

★

Manpower

Training was better on ships in the Imperial German Navy and the force only had to focus on the Atlantic.

★

Ports

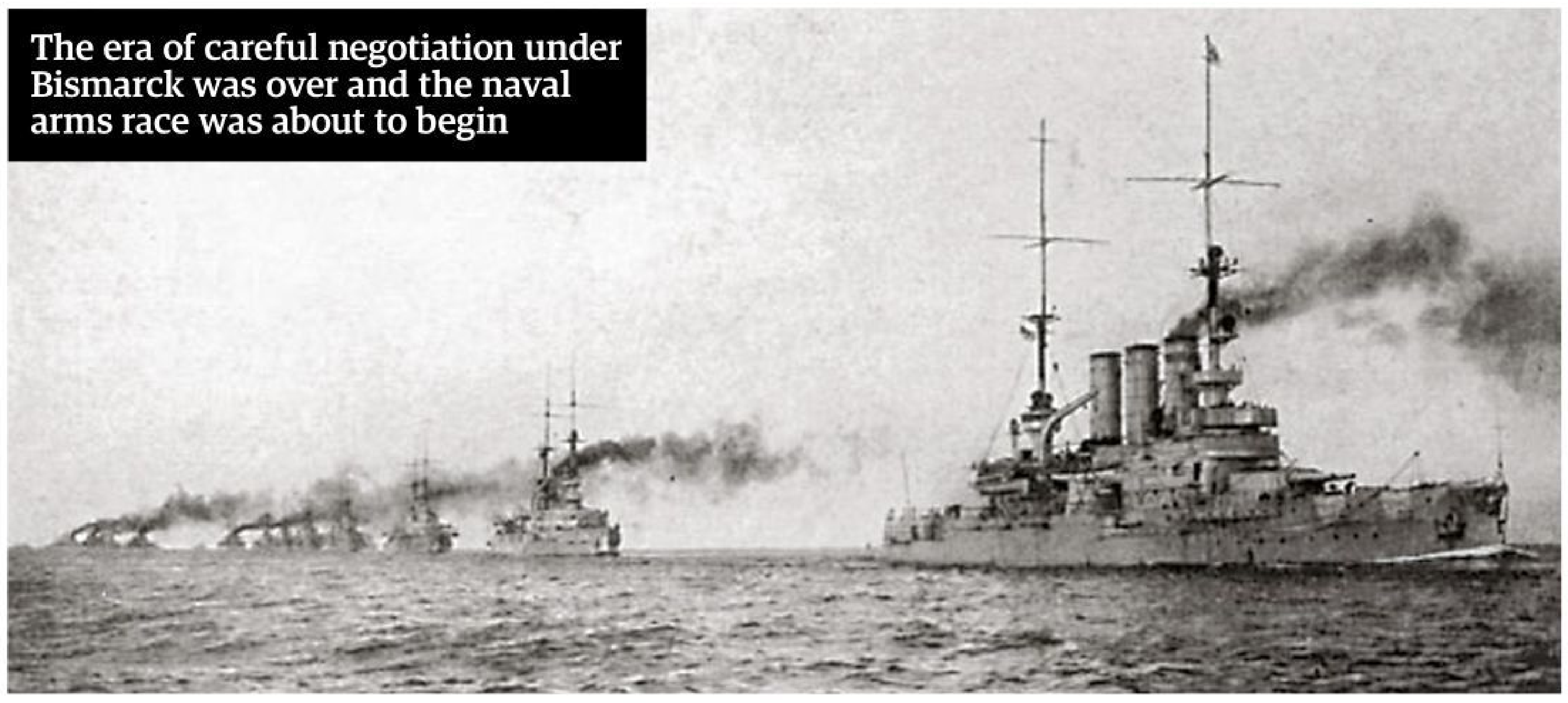
Although Germany had large harbours, the likes of Kiel, Hamburg and Wilhelmshaven could not compete with the sheer number of ports that Britain had access to.

Allies

Germany's allies were Austria-Hungary and the Ottoman Empire. In terms of naval power, both these states were flawed – Austria-Hungary was landlocked and the Ottoman Empire's former strength was already waning.

Total

★★



The era of careful negotiation under Bismarck was over and the naval arms race was about to begin

Bernhard von Bülow was Chancellor of Germany from 1900 to 1909

> "Driven by a desire to compete with the world's elite nations, Germany was hungry for more military power"

SMS Kronprinz was one of four Konig-class battleships

SOMME

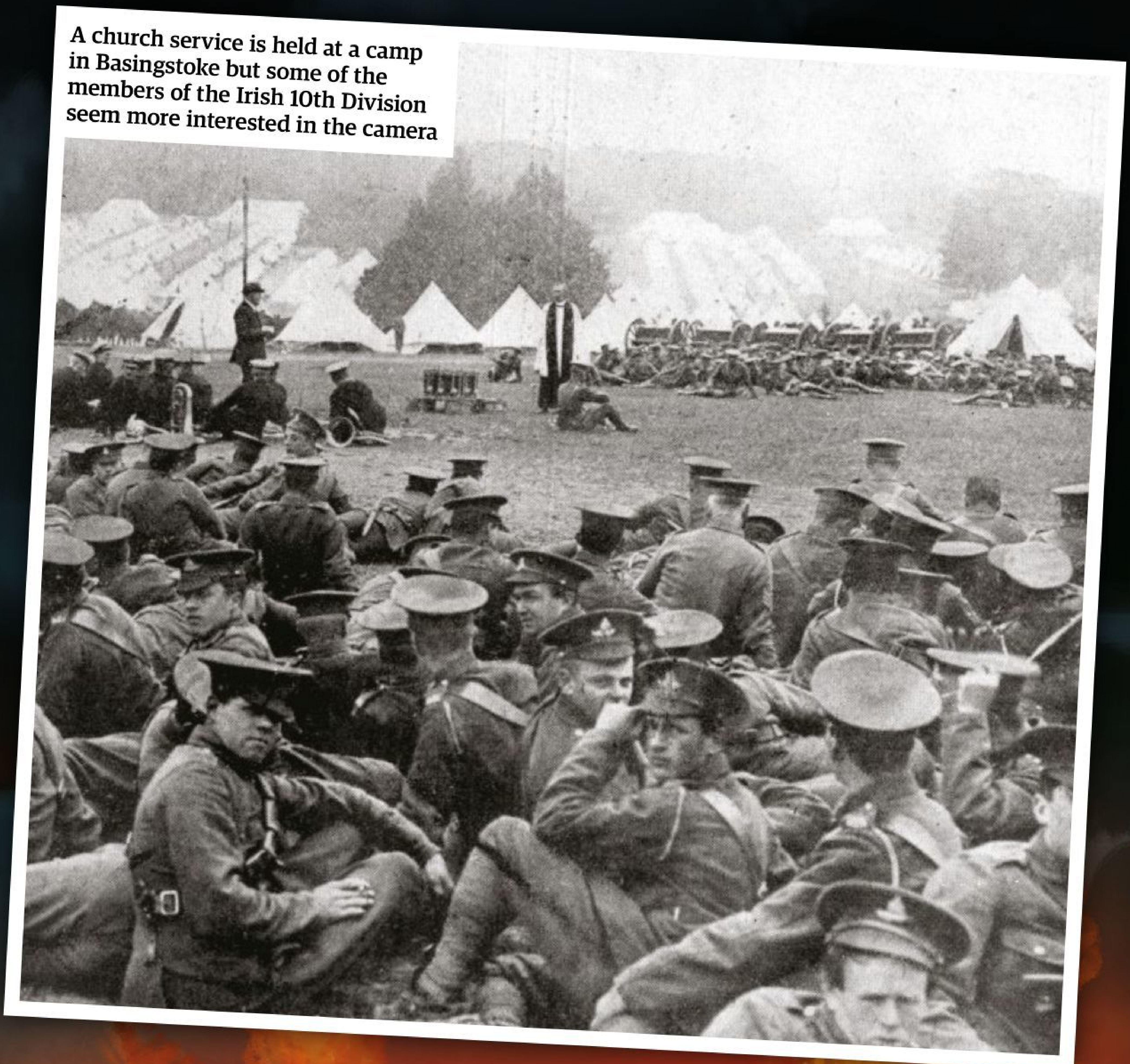
A LOST GENERATION

River Somme, France 1916

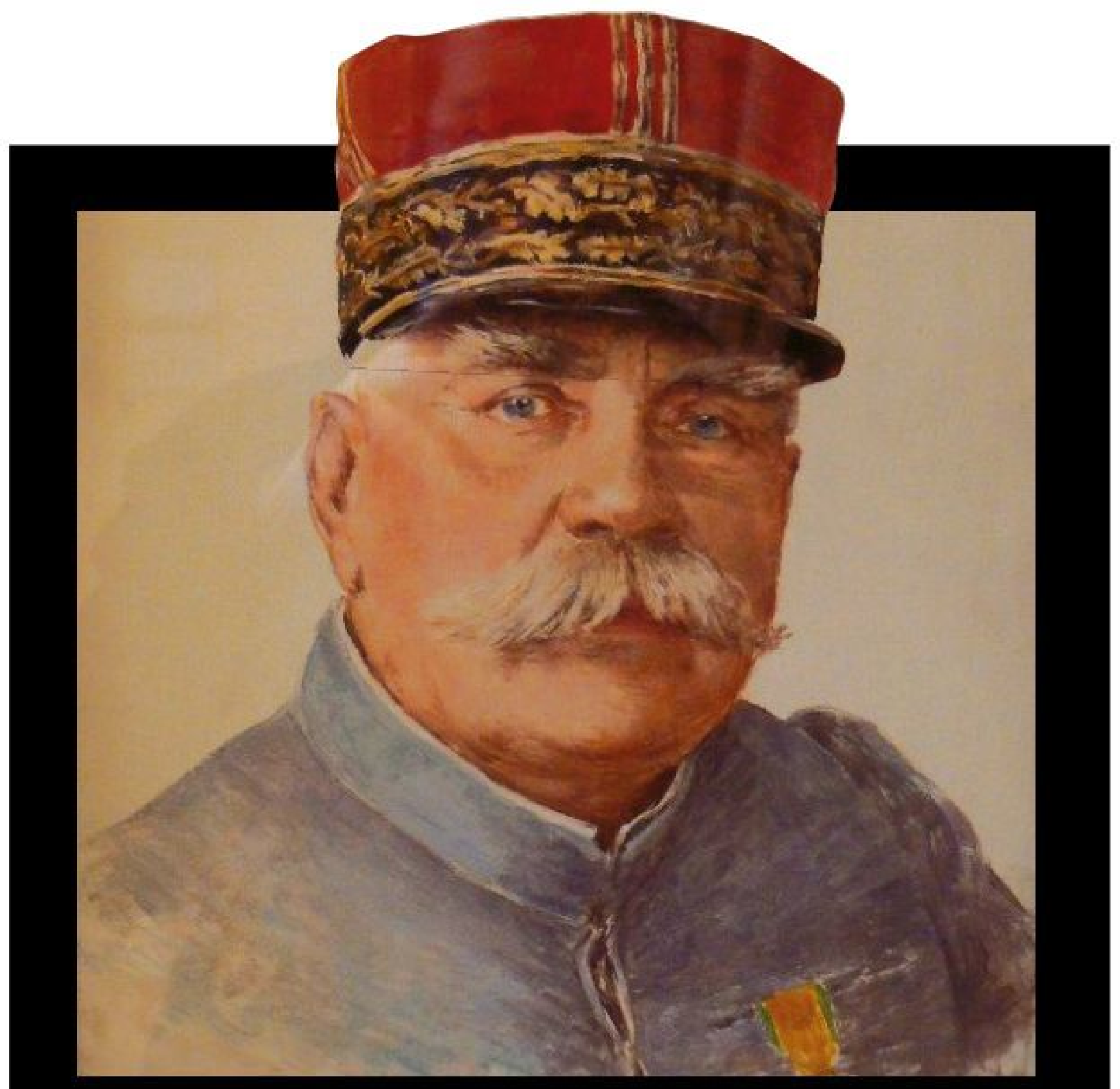
On 1 July 1916, tens of thousands of British soldiers marched into the jaws of death. It would become the bloodiest day in the history of the British Army: Nearly 20,000 Tommies were killed for little territorial gain. Nearly 30,000 more were wounded. What was supposed to be the scintillating start of the push towards defeat of the Central Powers became a bloodbath as thousands of men walked into the crosshairs of German MG 08s.

The men who bore the brunt of the machine-gun fire were part of Herbert Kitchener's New Army, a force assembled to provide Britain with the extra military muscle that would help turn the tide of the war. Conscription wasn't popular back home, but Kitchener, the secretary of state for war, devised another way to bolster the ranks: a recruitment campaign appealing to single men between the ages of 18 and 41 to fight for king and country. The British Army only numbered 250,000 at the start of the war and, although highly trained, this was not enough for a conflict on this scale. The call to arms recruited an extra 500,000 men as the British Army, a professional force, took on a new wave of volunteers who would become the spine of a new look military.

Each volunteer signed for a three-year contract. Fired up by patriotism, for many their first major offensive would be the Somme. In the opposing trenches stood the most formidable land force in the world, a conscript army that had trained for years: the Imperial German Army. Going up against them would be these British boys, oblivious to the true horrors of war. The artillery fell silent and the officer's whistles were blown. It was time to go over the top.



A church service is held at a camp in Basingstoke but some of the members of the Irish 10th Division seem more interested in the camera



Affectionately known as 'Papa Joffre', Joseph Joffre called the shots in the lead up to the Somme Offensive

Why the Somme?

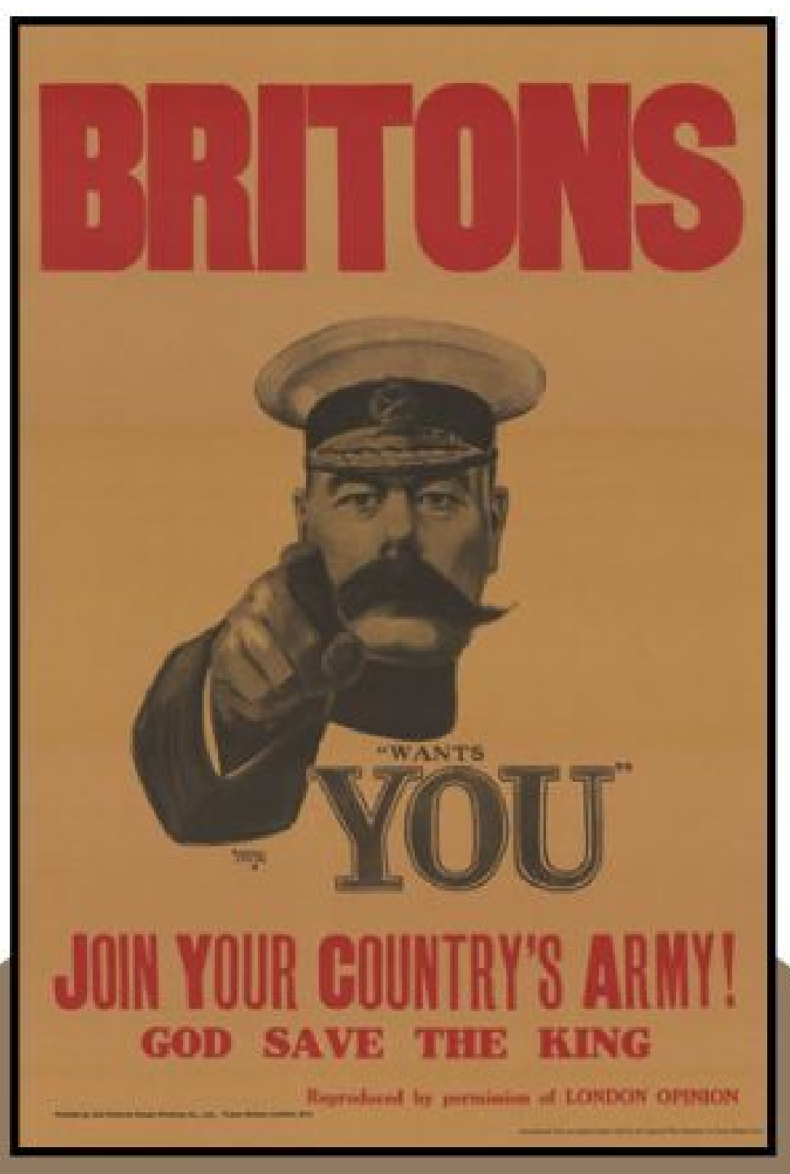
The Allied High Command decreed that northern France was the theatre in which the war would be won or lost. Joseph Joffre, commander in chief of the French military, called a meeting at Chantilly on 29 December 1915 to reveal his new idea. The plan was for a Franco-British offensive on an extensive front across the River Somme. The head of the French Army, General Ferdinand Foch, and British commander Henry Rawlinson weren't keen on the idea, and even Field Marshal Douglas Haig preferred an attack with naval support. A slightly reluctant agreement was reached when Germany unleashed a devastating attack on Verdun on 21 February 1916. If successful, the new front would reduce the almost unbearable pressure on the French and punch a hole into the German resolve – a war of attrition that would grind the German war machine into the dust.

The Pals Battalions

Since the outbreak of war in 1914, posters of Kitchener had adorned notice boards all over Britain and more than 20 million recruitment leaflets had been printed. The aim was to create a civic pride and even a friendly rivalry between cities to spur the men on to sign up. It seemed to work, as in Liverpool, for instance, four battalions were raised in a number of days even though only one was actually requested. The news coming out of Merseyside encouraged other cities to repeat this feat, and the 'Pals Battalions' were born.

Munitions shortages such as the shell crisis of 1915 had an adverse effect on the training of these new troops. Many of the drills were carried out with wooden poles and broomsticks in the place of rifles, and the men slept in makeshift barracks. As all the experienced troops were already at the front, the new recruits had to be trained by elderly and retired soldiers, who knew little of modern warfare. The training and lifestyle was quite simply a world away from facing German machine guns at the Somme. This training continued until the summer of 1916, when the British Expeditionary Force (BEF) needed support more than ever. The time had come for the men of the Pals Battalions to head for the coast and fields of Northern France. 557 battalions of fresh-faced Tommies had no idea of the storm they were heading in to.

Waterloo station was awash with recruits from all across the British Isles, eager to get a piece of the action. It was so hectic that mounted police were even called in to keep the crowds in check. There were 1,000 men from the Lancashire town of Accrington and a full strength battalion from Sheffield full of stockbrokers, students, journalists and teachers. A headmaster in Grimsby had even raised a company of 250 schoolboys and offered them to the local battalion for service. East Grinstead boasted a sportsmen's battalion that even included an England lightweight boxing champion. The full spectrum of society was present from public schoolboys to shop assistants. No British Army has ever incorporated such a high proportion of men acquired from local communities before or since.


BRITONS
WANTS
YOU
JOIN YOUR COUNTRY'S ARMY!
GOD SAVE THE KING
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Who was Herbert Kitchener?

The British public trusted Kitchener after his success at the Battle of Omdurman. During World War I, he was criticised for his support of the Gallipoli Campaign and role in the 'Shell Crisis'. He died in 1916 on board a ship sent to the depths by German mines.

The bombardment begins

The thunder of 1,500 British howitzers lasted for an entire week as 1.738 million shells were fired at the enemy. This incredible barrage of missiles was one of the largest in history, and although it wasn't as targeted and thorough as perhaps Haig would have liked, it was nonetheless a huge onslaught. What

the British and French didn't know, however, was that the Germans had entrenched their bombproof shelters in the chalky soil of the Somme so well that the bombardment was largely nullified. Even the barbed wire, which was notoriously thick and tangled, survived much of the shelling. However, the Allied High Command couldn't know this, and the lack of accurate reconnaissance meant that when the barrage finally stopped, they fully expected the infantry to defeat what was left of the enemy with ease. Sadly, this was not to be the case, and when the bombing subsided, the Germans manned their machine guns knowing an infantry rush would not be far away.

The soldiers may have gleefully sung as they waited in the trenches, but on that fateful summer's day they were a collection of individuals, not an army that would bring the main player within the Central Powers crashing down. Haig had initially wanted to delay the attack as he believed that with further training his forces would be able to unleash a more effective attack. However, France could not hold Verdun for any longer. The ill-fated assault got under way at 7.30am.

A black day for the British

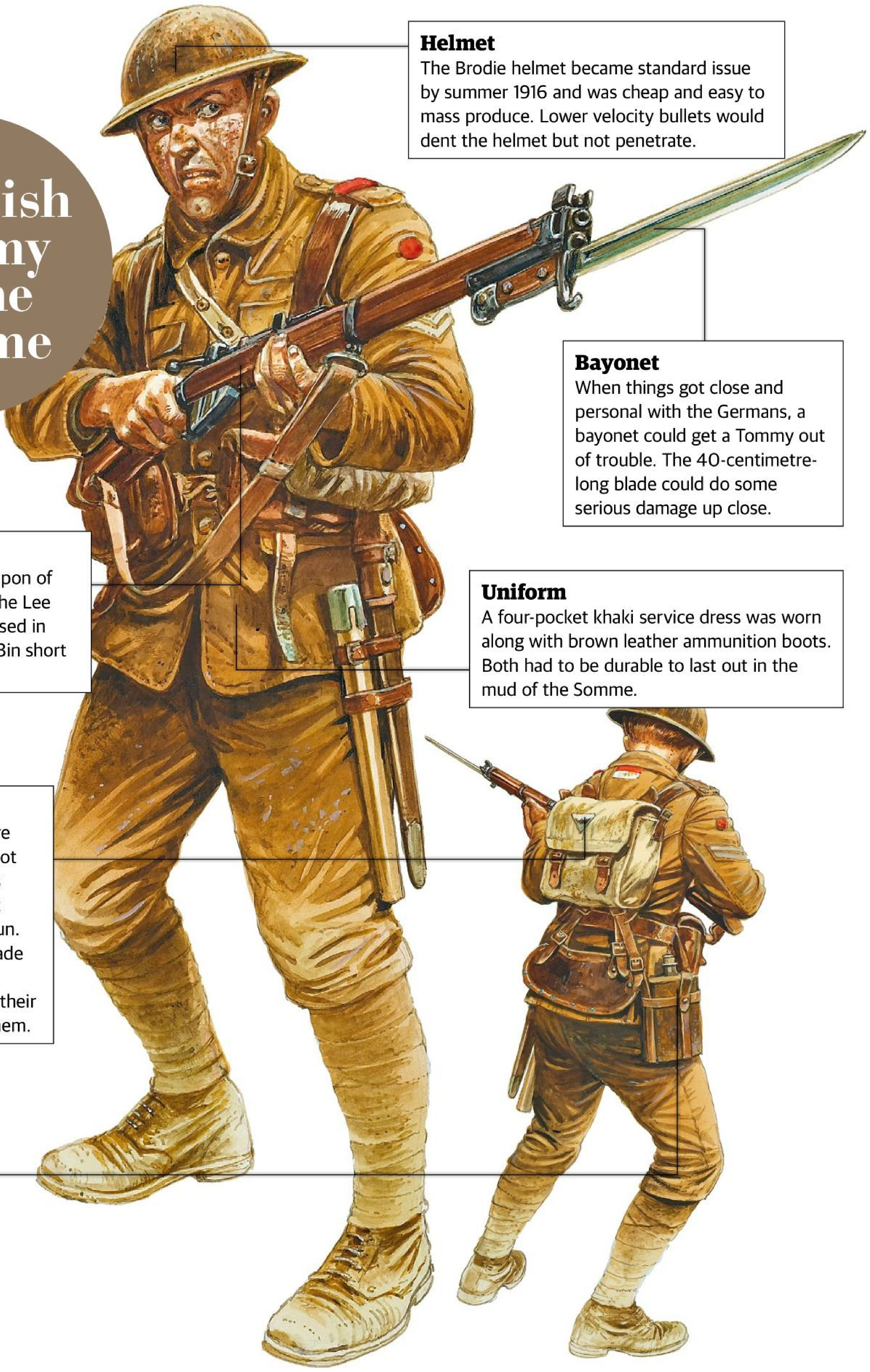
The 36th (Ulster) Division is believed to have been the only unit to maintain ground for a significant period of time on the first day. Out of the 720 Accrington pals who fought, 584 were killed or wounded, and the pals from Leeds, Grimsby and Sheffield lost similar numbers. The day ended with minimal gains, but some companies had advanced into and taken Peake Trench, the German front position on the right flank of the front line in the Birch Tree Wood area. The first media reports

> **"We beat 'em on the Marne, we beat 'em on the Aisne, we gave 'em hell at Neuve Chapelle and here we are again"**
>
> **A TOMMY SONG FROM THE WAR**

The Verdun effect

With the French focusing on the Battle of Verdun, more British divisions had to step up. The BEF had been severely depleted, so the new recruits were desperately needed for the Somme Offensive. A mighty 27 divisions were ready to 'bash the Boche' on day one of the Somme, with 19 of these made up of New Army recruits. These 750,000 British men faced off against 16 divisions of the German Second Army. The Somme was the first time Britain had deployed an army of this size against the core of the German military machine. Although the French were preoccupied with Verdun, they mustered 11 divisions, which were positioned on the south end of the front. Their assistance was invaluable.

A British Tommy at the Somme



Helmet
The Brodie helmet became standard issue by summer 1916 and was cheap and easy to mass produce. Lower velocity bullets would dent the helmet but not penetrate.

Bayonet
When things got close and personal with the Germans, a bayonet could get a Tommy out of trouble. The 40-centimetre-long blade could do some serious damage up close.

Rifle
The long-standing weapon of choice, this model of the Lee Enfield rifle was first used in 1907 and was of a .303in short magazine design.

Uniform
A four-pocket khaki service dress was worn along with brown leather ammunition boots. Both had to be durable to last out in the mud of the Somme.

Biscuit tins
The Tommies were made easier to spot by metal triangles on their back that glistened in the sun. This, however, made it easier for the Germans to latch their crosshairs onto them.

Equipment
120 rifle rounds were carried by each soldier along with a two-pint water bottle to quench thirst while they were in the heat of battle.

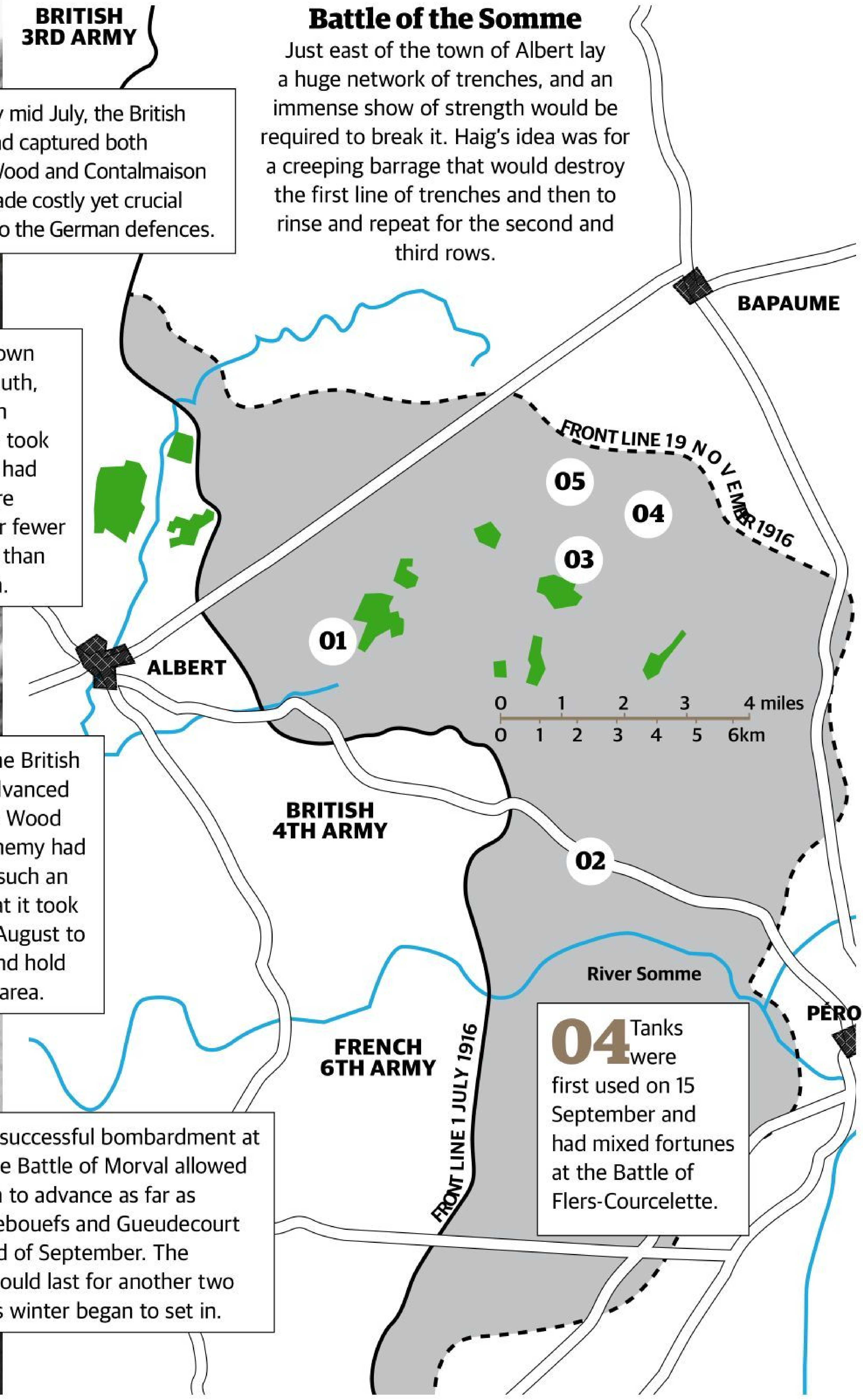
The British war machine rumbles forward towards the frontline prior to the first day of the Somme Offensive

Wounded German soldiers are escorted behind the lines as Tommies watch on from their trenches

emerged on 3 July, but the journalism was inaccurate to say the least. Both John Irvine's report for the *Daily Express* and an article by the *Daily Chronicle* were immensely positive about the events and made no mention of the slaughter. The reason for this is likely down to the sources being high-ranking military officers unaware of the plight of the Volunteer Army. Away from the British media, casualty lists began to slowly reach the families of those who had given up their lives on the first few days of the Somme. Villages and neighbourhoods back home would never be the same.

The slaughter continues

On day two, the troops were again rushed into battle. As food, water and ammunition reached the new front, the 15th Battalion captured 53 prisoners including three officers. The 7th East Lancashire Regiment even managed to capture Heligoland, an area of strong German defences. The 15th Battalion were one of the most successful units from the first few days of the Somme but their tiny two-kilometre advance, the best of any group, had come



Battle of the Somme

Just east of the town of Albert lay a huge network of trenches, and an immense show of strength would be required to break it. Haig's idea was for a creeping barrage that would destroy the first line of trenches and then to rinse and repeat for the second and third rows.

01 By mid July, the British had captured both Mametz Wood and Contalmaison as they made costly yet crucial inroads into the German defences.

02 Down south, the French regiments took Curlu and had made more ground for fewer casualties than the British.

03 The British advanced to Delville Wood but the enemy had dug in to such an extent that it took until late August to capture and hold on to the area.

04 Tanks were first used on 15 September and had mixed fortunes at the Battle of Flers-Courcelette.

05 A successful bombardment at the Battle of Morval allowed the British to advance as far as Morval, Lebouefs and Gueudecourt by the end of September. The Somme would last for another two months as winter began to set in.

at a terrible price, losing 18 officers and 610 soldiers. The 16th Battalion hadn't fared much better with 12 officers and 460 soldiers dead on the battlefield.

Elsewhere, the 11th and 12th battalions had missed the first attacks but went into battle on the 2 July, attacking Bernafay Wood and capturing the retreating German soldiers' field guns. The enemy had the last laugh, however, and began shelling the area, killing huge numbers. The battalions managed to hold their line until 8 July when they were withdrawn for a much-needed rest. It must be remembered that the first few days of the Somme weren't without some gains as Mametz, Fricourt and Montauban were captured on the Thiepval-Morval ridge, but the loss of human life was still excruciating to bear.

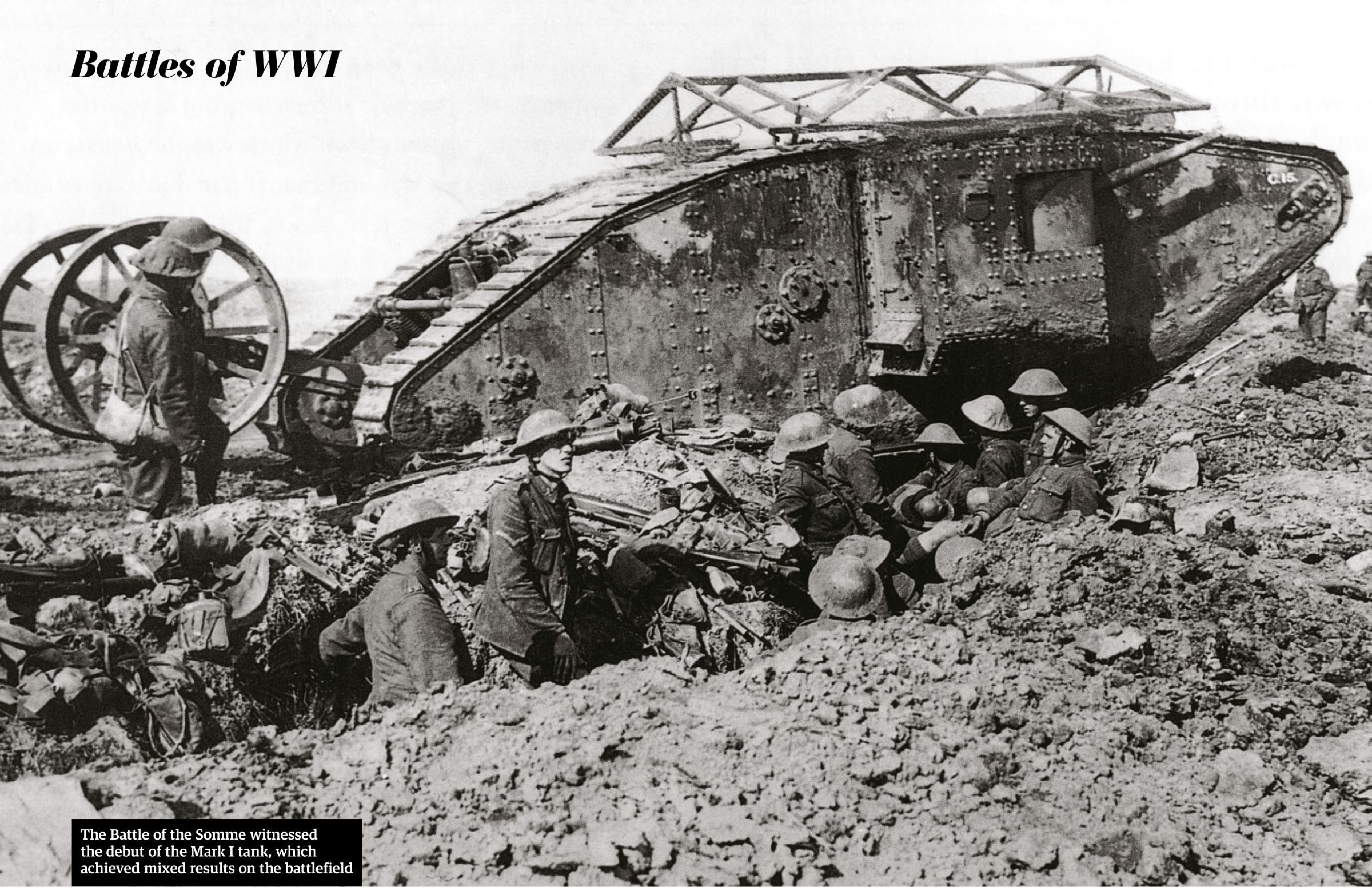
One of the reasons so many perished was due to the strictness of the orders. The generals realised that this 'army' was not an expertly drilled force, so made their instructions as detailed as possible. The result was a distinct lack of initiative, so even if the battalions could find a potential way out of the slaughter, they would not try to seek it. Some believe that one of the motives behind the huge artillery bombardment was that both Haig and Rawlinson had doubts about the calibre of the soldiers and wanted to make the assault as easy as possible for their men.

The early days of the Somme did see some success, however. The courage shown by the Volunteer Army had put so much pressure on the German war machine that Chief of the German General Staff Erich Von Falkenhayn was forced to postpone major offensive operations at Verdun in July, relieving the burden on the battered French troops. Bazentin Ridge was taken by British forces in the same month and some of the hardest fighting of the whole battle took place at Delville Wood, with Australian and South African troops assisting the overworked Pals Battalions. There were 100,000 German casualties in a fire fight at the village of Ginchy as Kitchener's boys began to come into their own.

Dawn of the tank

The British infantry was up against it for the first few months of the Somme. The German trenches only sported insignificant scars from the artillery bombardment and the British papers spoke of the horror of corpse after corpse stacking up on the battlefield. A potential antidote to the perilous situation came in September when the Volunteer Army witnessed the first ever tanks on the world's battlefields. 49 tanks were introduced initially, but there were problems from the start as only about 20 of the machines that eventually reached the front line were battle ready.

The landships, as they were first known, were kept in the greatest secrecy and very few men had trained with them prior to the Somme. Some even believed they were being sent water tanks to quench the infantry's thirst, such was the scarcity of information. The 28-ton Mark I tanks lumbered towards the enemy lines in a slow and steady yet relentless advance. The tanks arrived on the field at 6.20am on 15 September. While the Tommies watched on in awe, inside the behemoths was a frantic scene as the crew battled the heat and noise to keep the momentum of the tracks and fire the weaponry. Gunners and loaders struggled to aim



The Battle of the Somme witnessed the debut of the Mark I tank, which achieved mixed results on the battlefield

as the vibration of the tank was so violent, while the three drivers each needed did battle against a complex system of gearboxes. The Germans were visibly frightened by these mechanical monsters, however, and both Flers and Courcelette fell, with the advancement resulting in gains of roughly 2,300 metres across a five kilometre front on 15 September.

Tanks were the great new hope, and eyewitnesses described their ability to flatten walls and demolish barbed wire as a whole new type of warfare, as the British soldiers used the massive machines like bullet sponges. At one point, 400 Germans waved the white flag towards two immobilised tanks - they were that unsure of this alien device with almost unreal firepower. All reports of tanks on the battlefield were censored by the German press, which did not want to report this new threat for fear of lowering morale. However, as it dawned that they were unreliable, the Germans stopped surrendering on the spot and began to devise ways of taking them out, minimising their effectiveness. The Mark I's problematic technical issues and the lack of tactics given to the Volunteer Army curtailed their influence. Some tanks got through the German defences and performed their duty admirably, but ultimately the execution was rushed, and every Tommy turned back to their lines and sighed as another Mark I plummeted into the abyss of a wide enemy trench.

The road to winter

The gains made on 15 September were the greatest since the Battle of the Somme began. The entire month was the largest loss of life for the German Army during the battle and the Fourth Army managed to capture Morval on 28 September even without any armoured assistance. Thiepval Ridge was also taken and both sides believed it to be the most critical high point of the surrounding area. The Volunteer Army were seemingly becoming accustomed to the battle they were in but still, only minimal gains were being made and the Germans were happy to utilise a holding campaign. After the occupation of the valuable ridge, Haig was intent on pressing for more strategic gains. As the weather worsened, the Battle of Le Transloy raged on for two full days until the Germans were finally driven from the area. The Somme was turning into a rain-soaked swamp but still the British attacked as winter drew in.

The conditions at Le Transloy fast became unsustainable but fighting was still taking place on the Ancre Heights. The targets for the British battalions were the Schwaben Redoubt and the Stuff Redoubt, German defensive positions that had caused so much pain to the Volunteer Army over the last few months. Both of these key areas were stormed by the courageous troops who fought through defiantly the heavy rain and even heavier enemy fire. As the last month of the Somme dawned, what would be the final few operations were conducted alongside the River Ancre between 13 and 19 November.

The artillery bombardment began at 5.45am, and after it came the infantry, who advanced painfully through swathes of mud. The following seven days of attacks summed up the Somme as a whole - some tactical successes was achieved but with a terrible loss of life. It was hoped that this late surge could be invaluable in an eventual British and French victory, but in the torrential rain, no major gains were made except for the wounding of a young German corporal in the 6th Bavarian Reserve Division named Adolf Hitler.

Somme Victoria Cross heroes

A selection of the brave 51 men who won a VC at the Somme

Frederick Jeremiah Edwards

A fearless Irishman skilled at flushing out enemy positions with grenades

In September, the British, now bolstered by tanks, were intent on capturing Thiepval Ridge, a German stronghold located on valuable high ground. Part of the Middlesex Regiment, Edwards showed immense bravery by doing what his officers could not – using grenades to take out a machine-gun nest. The private kept fighting on until 1918 when he was captured by the Germans. He survived the war but was sadly forced to sell his VC in peacetime when he was strapped for cash.

David Jones

Driving back the Imperial German Army with no food or water

This young sergeant's defining moment came on 3 September 1916 at Guillemont. After witnessing his commanding officer being gunned down by Germans, Jones took control of the platoon and managed to capture a key road, which they would go on to hold for two more days – while enduring three waves of German attacks. This heroism earned the Liverpudlian his VC, but he sadly never lived to see it as he was killed in the Battle for Transloy Ridges just a month later.

Donald Simpson Bell

The only professional footballer to be awarded a Victoria Cross

Bell enthusiastically answered Kitchener's call, joining the West Yorkshire Regiment in November 1914. He arrived on the Somme shortly after returning from his honeymoon, and on 5 July, he was tasked with assaulting enemy lines. Under heavy fire from a German machine gun, he managed to take it out by launching an expertly placed grenade. He was sadly killed five days later, but his heroism was not forgotten and the area is now known as 'Bell's Redoubt' after him.

James Youll Turnbull

The tough Glaswegian who single-handedly defended a trench

A member of the highland light Infantry, James Turnbull enlisted in the Lanarkshire Rifle Volunteers prior to the outbreak of the war. He was one of the brave men who ventured over the top when the bombardment ended on 1 July and, despite his whole squad being taken down, he managed to make his objective. Holding his position, he hopped on enemy machine guns and threw back German grenades, however, the brave Scotsman was the victim of a German sniper later that day.

Gabriel George Coury

A brave Liverpudlian who saved one of his own while putting his life in the balance

By 8 August 1916, the British were on the advance through the village of Guillemont. Second Lieutenant Gabriel George Coury of the South Lancashire Regiment was under orders to construct a new communication trench. The back-breaking task was completed but men were still being lost. At one point, Coury charged into full view of the enemy to save an injured officer. Putting his life in danger, he leapt back into the trench with his comrade while being strafed by German machine-gun fire.

A German soldier sports a Stahlhelm, the replacement for the spiked Pickelhaube that came into use in 1916

© Alamy, Osprey Publishing, Joe Cummings

Aftermath: the lost generation

The four and a half month-long battle ended as the downpours turned into freezing sleet. The British forces had suffered a total of 420,000 casualties. The Volunteer Army had been through hell, seizing only a strip of territory that was 32 kilometres long and 10 kilometres deep. After the Battle of the Somme, optimistic patriotism had melted away and men were less willing to sign up, and conscription took centre stage as a more effective means of army recruitment.

The Pals Battalions were a two-year experiment that was obliterated at the Battle of the Somme, but Kitchener's New Army was no longer a group of individuals – it was a well-drilled and experienced professional force. The Somme wasn't all tactical and strategic oversights. Out of the trenches emerged a better land army with a hardened resolve that would take the fight to the Central Powers in subsequent conflicts at Cambrai and Arras and once again at the Somme in 1918.

The battle was a major defeat for the Imperial German Army and halted the Germans at Verdun. They hadn't anticipated that the British would fight so hard and the aim of 'bleeding France white' was stalled as they withdrew to the Hindenburg Line.

The heroism and stamina of Kitchener's soldiers had completely shone through and Britain's dogged and even blind determination to succeed had finally, and only just, won out in this bloody battle of attrition.

The Somme was a strategic success, but ultimately a pyrrhic victory, and the graveyards of the Pals Battalions resulted in a 'lost generation'. The men would never have a victory parade, and instead lay dead in the battlefields and trenches of northern France. It wasn't just British men who had suffered though. 200,000 Frenchmen lay with them, their job done in helping their countrymen hold on at Verdun.

Nearly 500,000 Germans were also killed at the Somme, a death toll the Central Powers would never quite recover from. The courage and tenacity had tipped the war in the Triple Entente's favour and sent shockwaves to the Kaiser as he realised just how great the British resolve could be.

In two years, the war was over and Germany resorted to unrestricted submarine warfare and then coerced the USA into the war. Germany would be on the back foot for the remainder of the war after the Volunteer Army's heroics at the battle of the Somme.

Battle of Cambrai

Cambrai, Northern France
November 1917

By 1917 the British Army's notions of war had changed entirely. Any romantic ideals of the glory of combat and the open battlefield had been trampled and drowned in the blood-drenched, rain-slicked mud and barbed wire of the trenches of the Somme. Men fought and died for yards that felt like inches. Three years of almost imperceptible movement in the fields of France had pulled the wool from British commanders' eyes.

With change so desperately needed, it's not surprising that the plan of attack at Cambrai was the product of ideas from three groups. British preliminary bombardment meant German forces were always alerted to the fact an attack was imminent, enabling a tactical retreat before a counter-attack. In August 1917, artillery commander Brigadier General Henry Hugh Tudor proposed 'silent registration' of guns, bringing the artillery to the battlefield without alerting the enemy. This process would be greatly assisted by the use of the No.106 instantaneous fuses, which meant that shells would detonate immediately on impact.

Meanwhile, the Tank Corps' Brigadier General Hugh Elles and Lieutenant Colonel John Fuller were desperate for a chance to show their machines' worth. Fuller was convinced they would be capable of conducting lightning raids to smash resistance and drive the British line forward. This dovetailed neatly with Tudor's plan, as General Julian Byng, head of the Third Army, recognised. Byng turned his eye to Cambrai, a quiet area that was used by the Germans as supply point. While it was very well defended with the deep trenches of the Hindenburg Line and barbed wire, an attack would certainly be unexpected despite the area's strategic value.

With six infantry divisions, five cavalry divisions and nine tank battalions, more than 1,000 guns were mustered for the attack. There would be a front of around 10,000 yards, covered by the III and IV Corps of the Third Army, which would be widened as the attack progressed. The III Corps had to break the Masnières-Beaurevoir line, enabling the cavalry to circle around Cambrai and cut it off from reinforcements before 48 hours had passed. Obviously, secrecy was paramount.

The Mark IV tanks were divided into "male" and "female" groups, with the former having four Lewis guns and two six-pounder Hotchkiss naval guns. The latter were each fitted with six Lewis guns. Without the naval guns, the "female" tanks were lighter, at 26 tons, while the "males" weighed 28.

British soldiers photographed during the battle. The photo's original caption reads: "Down in a shell crater, we fought like Kilkenny cats"

Field Marshal Douglas Haig was the most senior British commander during WWI

General Julian Byng, commander of the British Third Army, pictured in April 1917

The crews also noticed that while the males had a door at the back, the female tanks had doors closer to the ground that were harder to get out of in an emergency. Eight men shared the single space with the engine, while the machine was only capable of reaching a speed of 3.7mph, and more typically around 1mph over bad terrain.

The tanks would lead, providing cover for the infantry as they crushed the barbed wire effortlessly under their tracks. As for navigating the trenches, each tank carried a fascine - a bundle of wood and branches, which would be deposited into the trench in order to fill it, so that the vehicle could drive over it. Meanwhile, a grapnel was fitted to some of the tanks to enable them to drag away the crumpled wire as they went, so that the path was clear for the advancing cavalry.

Several things needed to go very right in order for this so-called "clockwork" battle to work. Haig had fallen victim to overreaching in previous campaigns and he was determined that the Cambrai offensive have limited objectives and stick to its time frame. Minimising losses was crucial - even more so when he was forced to send two divisions to support the Italian front. Co-operation and communication between the divisions was also vital, as the battle's events would prove.

The battle rumbles to life

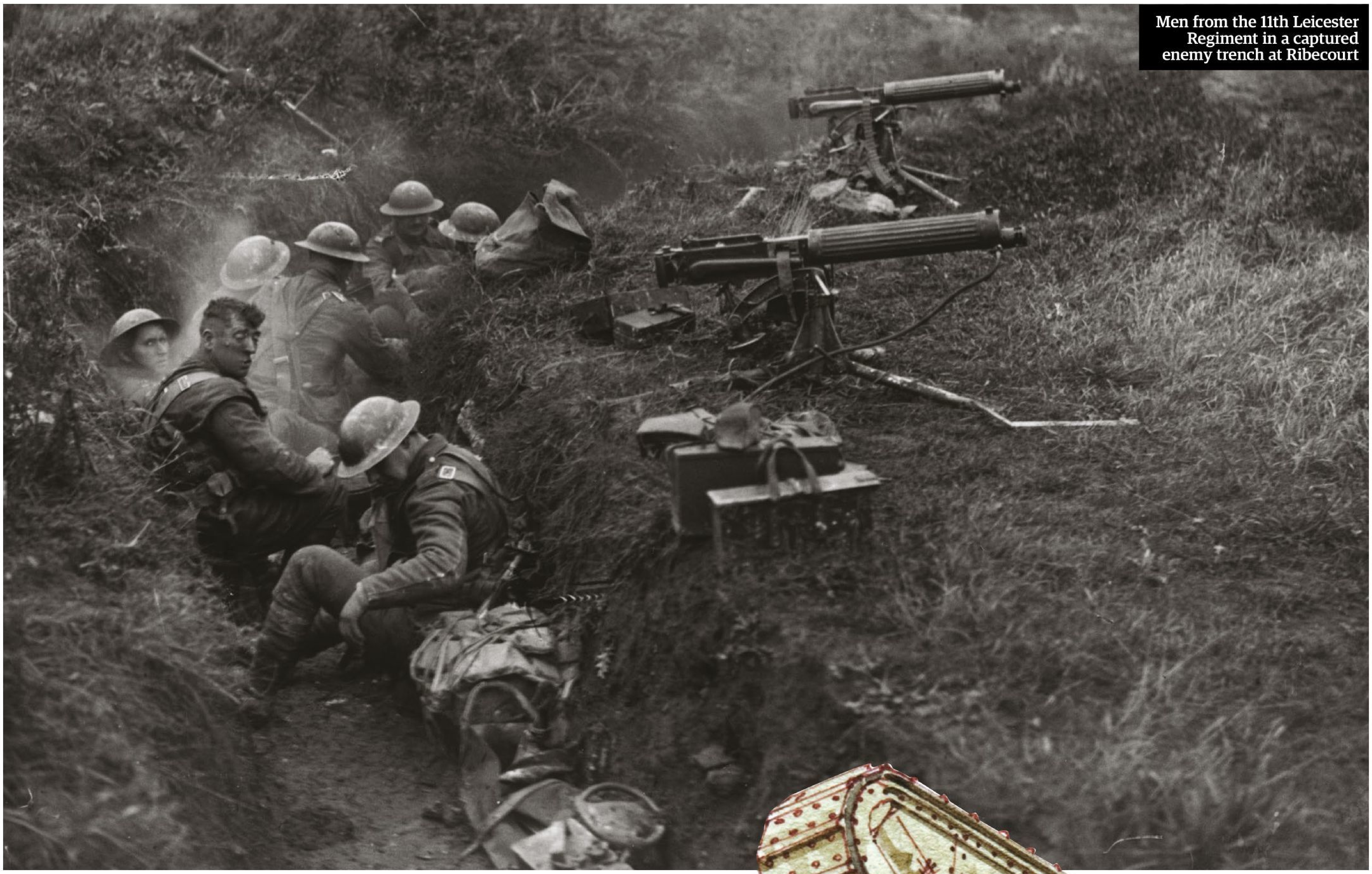
The attack began at 6.20am on 20 November as the artillery began shelling. With this stunning overture, the tanks advanced into the fog. The gentle incline made things very easy for the drivers, while the infantry marvelled at the ease with which the tanks rolled over the hazardous barbed wire as they followed them into battle, as did the men inside.

The initial advance seemed to be going impossibly well. The "clockwork battle" was living up to its name as the Germans were taken completely by surprise by this sudden, shocking attack. The British artillery kept up a devastating rate of fire, as much as possible given the two-rounds-per-minute rule to avoid overheating. The advance was also supported by the Royal Flying Corps, whose targets were on the ground rather than in the air. As the pilots braved machine-gun fire to drop their payloads, the weather worked against them. An Australian squadron pushed through punishingly thick fog at Havrincourt, barely able to see one another, let alone their targets. If their planes went down, they had to fight their way back to their lines, as Lieutenant Harry Taylor was forced to do, picking up the weapon of a fallen man and setting out to find support.

This isn't to say there was no resistance. A myth sprung up as the days went on about a German gunner who held the enemy at bay entirely by himself. That myth does a disservice to the determination and skill of the men who suddenly found themselves on the back foot. Some of the troops stationed near Cambrai had come from the Russian front and had never seen a tank before. It's impossible to know what these soldiers thought as the metal leviathans rolled towards them, but they fell back on their training, resisting where possible before making a tactical retreat.

Before long, communication began to prove an issue. When the tanks worked in tandem with the infantry, such as through Havrincourt and Graincourt, things went very smoothly. Elsewhere,

> "With six infantry divisions, five cavalry divisions and nine tank battalions, more than 1,000 guns were mustered for the attack"



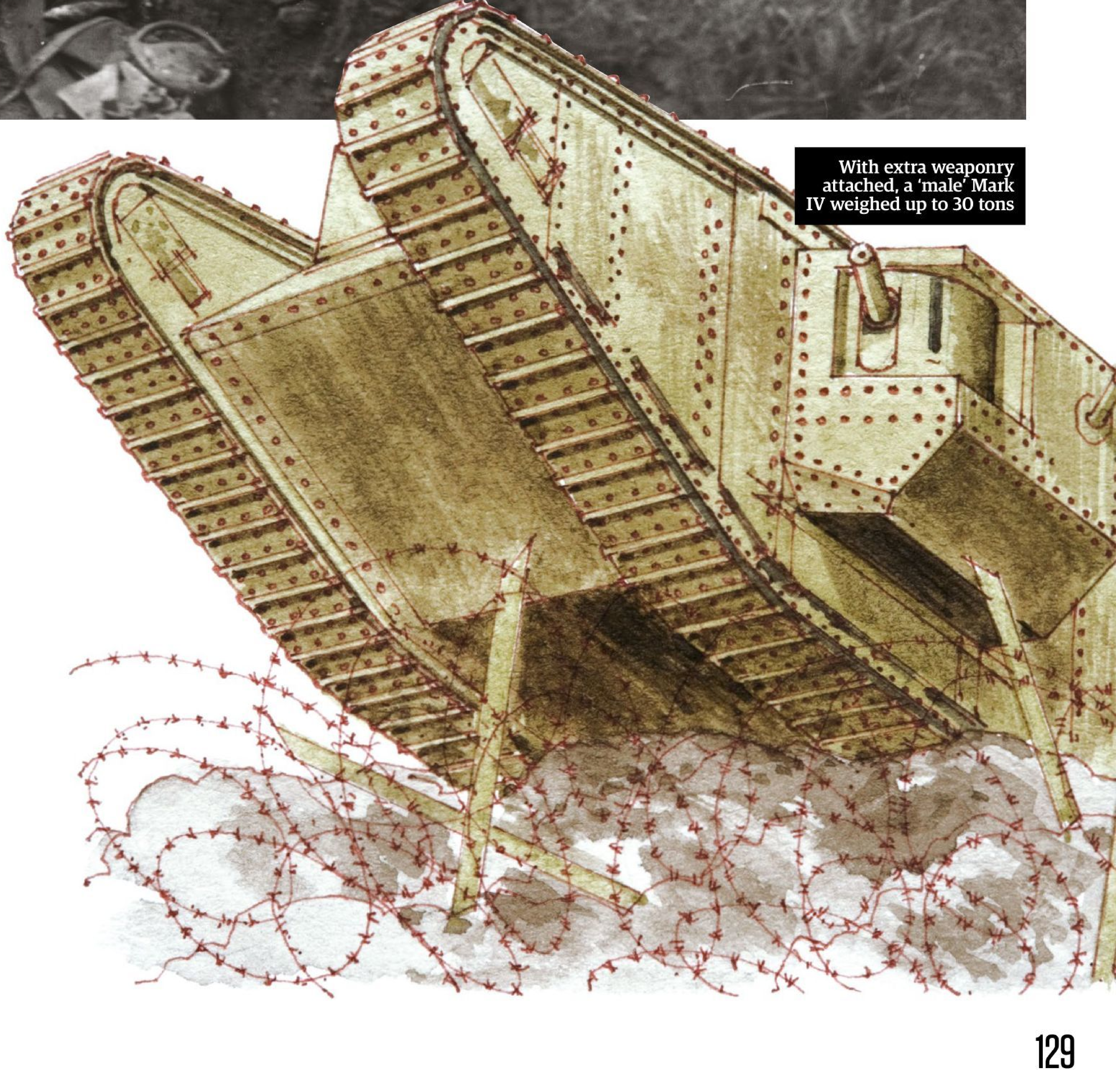
Men from the 11th Leicester Regiment in a captured enemy trench at Ribecourt

infantrymen were forced to bang on the door of the tanks to get their attention, while confusion over objectives led to groups of infantry being forced to take key positions without artillery support. However, sitting in these slow-moving targets had its own terrors. They drew the bulk of enemy fire and if the engine gave out, whether due to attack, or even a fire, the tank became a sitting duck. Once engaged in combat, the inside of the tank would become incredibly hot as the guns began to fire and the sound of their doing so was deafening. Visibility was shockingly poor, while the fact that most tanks had to stop in order to turn meant that they were a popular target on the battlefield.

Nevertheless, the speed with which they were taking ground was intoxicating; each trench taken and each line of wire cleared was another step towards the objective and morale had rarely been higher. As the tanks moved further away from their lines of reinforcement, establishing a clear road and lines of communication back became crucial. However, the supply mules proved nearly useless in the tangle of mud and wire, while the narrow roads quickly became clogged with traffic back and forth, ferrying wounded and prisoners.

The Third Army consolidates

Despite the ground gained, the first day ended with some major concerns. While crossing trenches



With extra weaponry attached, a 'male' Mark IV weighed up to 30 tons had proved easy enough for the tanks, moving past the St Quentin Canal was another matter indeed. A crucial bridge at Masnières had been crushed by a tank that had attempted to cross the canal, stopping the planned infantry advance, while another had been mined. The cavalry was delayed by the clogged roads, while a lack of communication frequently meant they were stranded or forced to retreat. A lone squadron of Canadian cavalry realised it was the only unit to make it across the canal at Masnières and was forced to find its way back around and across.

Meanwhile, the key village of Flesquières had not been captured after the advancing tank divisions became separated from the infantry of the 51st (Highland) Division. With no infantry support, the tanks were target practice for the gunners at Flesquières ridge and suffered huge losses. Messengers from the battlefield, some of whom walked the two miles on foot, struggled to convince their commanders that Flesquières had not yet been captured. Crucially, Major General George Montague Harper refused to commit any of the troops held in reserve to take the objective.

The second day required consolidation and advancement. Masnières was taken in the morning, but as a salient it was open to a punishing amount of shell and machine-gun fire, and the German air force soon reappeared to make life very difficult for the British troops. Meanwhile, the tanks had used all their improvised wooden fascine bridges on the first day, which made crossing the trenches difficult, and the infantry were reluctant to advance without them.

Things looked much better for the IV Corps, which advanced on Flesquières dreading the prospect of a prepared German resistance, only to find it had been abandoned. In contrast, while the cavalry helped take Cantaing, it struggled to work in tandem with the tanks as planned. Similarly, as the tanks moved into villages, it became clear they were not prepared for street fighting. With no

British	German
INFANTRY 6 CORPS	INFANTRY 1 CORPS
LOSSES C.44,000	LOSSES C.46,000
LEADERS **FIELD MARSHAL DOUGLAS HAIG, GENERAL JULIAN BYNG**	LEADERS **GENERAL GEORG VONDER MARWITZ, RUPPRECHT OF BAVARIA**
GAME CHANGERS 378 fighting tanks that enabled the British to move forward at an incredible rate on the first day of fighting	GAME CHANGERS The air force led by Baron Von Richtofen that arrived on the 23 November to combat the RFC.

01 A spectacular start
The Cambrai offensive gets off to a stunning start as the British tanks face the German artillery across the planned line of attack, rolling forward across trenches and barbed wire. It's impossible to overstate the impact that these machines, had on the morale of the British infantry, when they were working.

03 Communication catastrophe
Like Bourlon and its wood, Flesquières is a vital target and vantage point, but as the British tanks advance beyond the supporting infantry of the 51st Highland Regiment, they are sitting ducks. Pigeons are sent for the cavalry support that never comes, while infantry that is in the vicinity aren't alerted to the fact that they are needed. This is one of the most catastrophic examples of a lack of communication, leading to unforgivable losses.

04 Resistance at Bourlon

Some of the most brutal and devastating fighting breaks out in Bourlon Wood. Capturing it is crucial for the British as it's an excellent vantage point for German firepower. Once British forces enter the trees, the infantry are on their own and some wounded men will wait days to be rescued. Facing fierce resistance from German infantry, not to mention shelling and aircraft fire, Bourlon Wood continues to be fiercely contested at a terrible cost.

05 Importance of Fontaine

Few locations exchange hands as often as the small village of Fontaine. It's strategically important but painfully open to attack, as the British learn shortly after taking it. By the 26 November, the Grenadier Guards manage to take Fontaine despite incredible losses, but the lack of support means they're forced to retreat not long after their victory.

02 Transport difficulties

If the British forces are to circle around from the South, it is crucial to cross the St Quentin canal at Masnières. This initiative fails spectacularly when bridges are either mined by the Germans or collapse under the weight of the tanks. All supplies and reinforcements now have to come by road, which quickly becomes choked.

06 Speed at Gouzeaucourt

The German counterattack on 30 November takes place all across the line, but the speed with which they strike Gouzeaucourt seems staggering. British troops fall back and take shelter in a nearby quarry, but soon realise that they have given themselves no cover, with only one option remaining. The number of British prisoners taken is incredibly high.

machine gun on the top of the tank (it would be introduced in 1918), they were horribly vulnerable to fire from second-storey windows. Still, Fontaine was secured despite heavy losses, leaving Bourlon and its dense wood as the next target.

The offensive was on a knife edge without enough men to consolidate these gains. Fontaine was incredibly vulnerable, but was refused any artillery support and destroyed bridges made moving supplies incredibly difficult. Meanwhile, the German vantage points of Bourlon and Bourlon Wood posed a serious threat to the British. After a last-ditch effort ordered by Byng to push through, the order came to halt and dig in.

When Haig learned of the attack's successes and failures, he decided to junk the 48-hour time limit and continue the advance. He toured the battlefield, congratulating the men and helping to spread the myth of the lone German gunner at the Flesquières ridge, as that was surely a better explanation for the number of ruined British machines on the battlefield than the alternative. During this apparent lull on 22 November, German forces rushed Fontaine and retook it. Resistance was growing, and as the British dug in for the night in the miserable November cold they knew that their momentum was dripping away. Haig stressed to Byng that Bourlon and Fontaine must be captured by the end of 23 November.

> "Running from tree to tree, with the noise of ceaseless gun fire, a huge number of soldiers were lost"

Bitter fighting at Bourlon Wood

The fresh offensive was major, with 400 guns and 92 tanks, while the 40th Bantam Division was dispatched in order to relieve some of the exhausted men at the front. The tanks met with fierce resistance in Fontaine, and were forced to withdraw to the disapproval of Tanks Corps intelligence officer Captain Elliot Hotblack, who saw the devastating effect their retreat had on the infantry's morale. Further down the line, German infantry made life hell for the tanks, finding the machine gunners' blind spots and throwing hand grenades inside, leaving the British soldiers trapped and burning.

Having reached Bourlon Wood with the help of the tanks, fighting through the thick wood was now the infantry's job alone. It was here that some of the most-intense and gruesome combat was seen. Running from tree to tree, with an unimaginable noise of ceaseless gun and artillery fire, a huge number of British soldiers were lost in Bourlon Wood.

When the German forces were finally pushed out, they started shelling it. Meanwhile, both Bourlon and Fontaine remained in German hands despite attempts in the afternoon, but the casualties on both sides were horrific. As night fell, troops were sent to support the men in Bourlon Wood as counter attacks from the Germans continued well into the night. Haig told Byng that Bourlon ridge simply must be taken, so the Guard division was summoned to support and relieve the depleted forces.

German officers pose with a captured British tank in Cambrai. Hundreds of stranded or abandoned British machines were captured during the offensive

Tommies look on as British artillery arrives at Cambrai in December, 1917

Throughout 24 November, shelling and counterattacks continued on Bourlon Wood. Poor weather made it difficult for any RFC pilots to take to the skies and challenge the forces of the recently arrived Manfred von Richthofen, the Red Baron, whose planes rained fire on the wood. German efforts to grind down the soldiers in the wood continued throughout the day. Counterattack met counterattack, and 25 November saw further terrible lapses in communication and bloody skirmishes. Battalions without tank support were mown down by machine-gun fire at Bourlon, while an entire cavalry regiment ordered to wait within sight of the German artillery was shelled. A furious Haig ordered the capture of Bourlon and Fontaine by the 27 November, as German forces continued to push at the exhausted British throughout the night.

A planned attack on 26 November was the cause of fierce argument between Major General Braithwaite, who bemoaned the lack of support and fresh troops, and Byng, who had his instructions from Haig. The attack went ahead, as Fontaine was taken at tremendous cost and targets in Bourlon Wood were reached. However, there was no time before counterattacks drove the British forces back.

Manfred von Richtofen, known as 'The Red Baron', played a pivotal role from the air at Cambrai

The German offensive

While skirmishes wore both sides down, the time had come for the major German counter-offensive after reinforcements had been arriving since the second day of the attack.

Planned by Crown Prince Rupprecht of Bavaria, and widened by his superior General Erich Ludendorff, it was the first offensive planned against the British since 1915. Gas was fired into the wood two days before the attack, and at 6am on 30 November the assault began. Despite the warnings of some key officers, the British troops were simply not prepared for the assault at Gouzeaucourt, as German soldiers swarmed the British line and amassed prisoners. This was the first instance of the German stormtroop tactics, as the first wave of soldiers went around targets and cut them off as the further troops arrived.

As British soldiers realised what was happening, across all their lines, attempts were made to regroup and stand their ground as startled officers threw down their shaving kits and looked for their weapons. While German forces broke through in some places and were held up in others, communication broke down once again. There was simply no plan in place for this kind of counterattack, meaning that any attempts to fight back and reclaim ground were made on the hoof.

Much as the Germans had offered fierce resistance, so too now did the British. At Les Rues Vertes, the inspired and determined defensive tactics of Captain Robert Gee meant that their position and the brigade's ammunition dumps were held. He set up a Lewis gun, organised bombing raids against the attackers, killed two Germans who had infiltrated his position and killed the guards, before charging a German machine-gun post with his two pistols. While seeking medical attention he was forced to jump into a canal and swim to safety. His actions earned him the Victoria Cross.

As reinforcements arrived, the Guards Brigade retook Gouzeaucourt, while the forces in Bourlon Wood held determinedly to their positions. The conflict turned into a series of costly but unproductive skirmishes. As the days passed and the casualties mounted, Haig finally realised the necessity to fall back and form a line for the winter. He ordered a retreat on 3 December and by 7 December the lines had settled down, with both sides having made both considerable gains and significant losses in territory.

The British casualties numbered 44,207 killed, wounded or missing. The number of German losses has proved harder to calculate, with estimates ranging between 41,000 and 53,300. The battle has proven to be one of the most fertile grounds from which myths surrounding the First World War to develop. But speculation and stories aside, what is clear is that crucial lessons were learned in how important communication and co-operation between different divisions was.

A lack of support in reserve, a lack of communication, and that terrible desire to overreach led to the attack's ultimate failure. While it may have been the first large-scale tank offensive in the war, this landmark came at a terrible cost to both sides.

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THE LAST BATTLE

11 November 1918

Seeking a comrade's grave. The scale of casualties in WWI meant that some men were buried where they fell or in communal graves

At 9.30am on 11 November 1918, in the dying moments of World War I, 40-year-old Private George Ellison of the 5th Royal Irish Lancers found himself on a scouting mission on the outskirts of the Belgian town of Mons. Father-of-one Ellison, a former coal miner from Leeds, had been in Mons before. Four years earlier, as part of the Expeditionary Force, he had participated the British Army's first battle of the war – one that had ended in humiliating defeat. Since then, Ellison had survived every murderous technological twist World War I had produced, from trench warfare and machine-gun fire to high-explosive shells and poison gas. As well as Mons, he'd also fought at Ypres, Lens, Loos and Cambrai, some of the costliest battles of the deadliest war the world had ever seen and yet, somehow, he emerged unscathed.

Just 90 minutes before the Armistice, Ellison and his comrades were on the orders of British high command to retake the town they had lost in 1914. As they were creeping through a wood, a hidden German infantryman lined Private George Ellison up in his sights.

The Russian Revolution of November 1917 changed everything. The entire dynamic of World War I suddenly shifted, as Germany found itself no longer fighting a war on two fronts, but one. With the collapse of the Eastern Front, German High Command could now concentrate all its efforts on its war in the west – efforts that would be reinvigorated by the freeing up of hundreds of thousands of men previously committed to vanquishing the tsar and his armies.

The Russian capitulation couldn't have come at a better time for the Germans. In April 1917, in response to German naval aggression in the north Atlantic and a bizarre diplomatic incident that had seen Germany attempt to spark a conflict between Mexico and the USA, the United States chose to side with Britain and France in their crusade against the kaiser.

Although American troops had not yet arrived in any great force, they were coming, and the Germans – not least their most influential commander, General Erich von Ludendorff – knew it.

Before the US troops had time to make a difference, Ludendorff now proposed that the Germans on the Western Front should unleash a huge offensive. One that would finally break the three and a half-year deadlock of trench warfare, allowing German troops to seize Paris and end the war.

On 21 March 1918, that offensive began as the German army attacked along a 102-kilometre front. What became known as the Ludendorff Offensive was the biggest attack then known in modern industrialised warfare, around 10,000 artillery pieces simultaneously pounded the Allied lines. When the artillery bombardment lifted, lightly equipped, fast-moving shock troops (or storm troopers) raced across No-Man's Land, armed with flamethrowers, light machine guns and grenades. Their aim wasn't so much to seize forward trenches, but to infiltrate the rear of the Allied line, causing it to collapse, while heavy infantry mopped up the area in between.

"When the artillery bombardment lifted, lightly equipped, fast-moving shock troops (or storm troopers) raced across No-Man's Land, armed with flamethrowers, light machine guns and grenades"

> "Ludendorff's troops had advanced 48 kilometres to reach the River Marne. The glittering prize of Paris was now on the horizon"

unsere lieben Kameraden.

A German war cemetery containing five thousand graves at Sailly-sur-la-Lys, 12 October 1918

It proved to be an effective tactic. In just over a fortnight, the German army advanced 32 kilometres over an 80-kilometre front. A capture of territory compared to the stalemate of the previous three years. The first part of the offensive ended on 4 April, leaving the Allies dizzied and bloodied. Britain and France were now critically close to losing the war.

Ludendorff then set his sights on Paris, just 145 kilometres to the south of his line. If the Germans captured it, victory would be theirs. On 26 May, the German army renewed its offensive, and within four days, Ludendorff's troops had advanced 48 kilometres to reach the River Marne. The glittering prize of Paris was now on the horizon.

Left: Relaxed Irish Guardsmen still at their posts, some five minutes before the signing of the armistice

These huge successes hadn't come without a price, however. The German army had suffered about 350,000 casualties and had fought itself almost to a standstill. Although weak and exhausted, Ludendorff now demanded one last mighty push from his war-weary army.

On 15 July 1918, 52 German divisions attacked the Allied line. Having learned from previous encounters though, French defences were set well back and when German Storm Troopers reached them, they proved to have been out of range of their artillery support. Undamaged, they easily withstood the German assault. Ludendorff's gamble had failed and it was now the Allies' turn to go on the offensive.

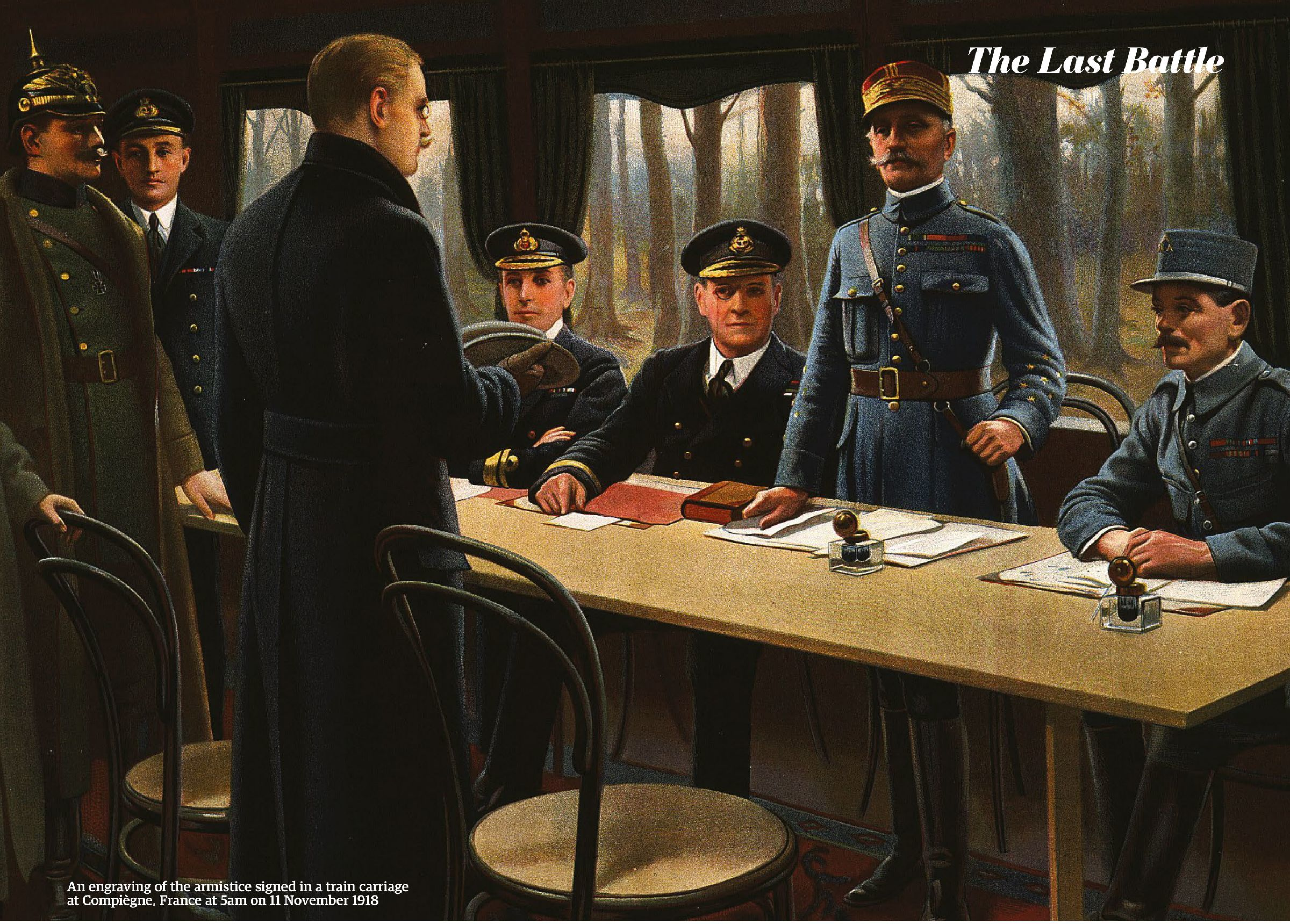
In a series of massive co-ordinated blows that heralded the birth of modern battlefield tactics, the full power of the Allied war machine would now be unleashed against the shattered German forces.

A hint of what was to come occurred at the Battle of Hamel in the Somme Valley on 4 July 1918, when an Australian division pulled off a small-scale, pulverising attack on the Germans. With infantry advancing behind tanks, supported by masses of heavy artillery, machine-gun fire and aircraft providing top cover, the Australians swiftly overwhelmed German positions that had remained unbreached for years.

This pioneering assault convinced the combined French and British forces – now under the command of France's Marshal Ferdinand Foch – to repeat the tactic, but on a much grander scale. On 8 August, a huge attack was launched near the town of Amiens, spearheaded by 530 British and 70 French tanks. It was the beginning of what became known as the 100-day offensive, and it would finally win the Allies the war.

On the first day alone, the Allies advanced 12 kilometres, inflicting some 27,000 casualties on the bewildered Germans. This kind of fluid warfare had not been seen on the Western Front since 1914. Over the next month, the Allies pushed the Germans back a further 40 kilometres over a 65-kilometre front.

By now, American troops were also arriving en masse. Under the command of General John J



An engraving of the armistice signed in a train carriage at Compiègne, France at 5am on 11 November 1918

Pershing, they numbered more than 1 million by July 1918, and by mid-September 1918, they were ready to launch their first attack as an independent army. Their target was the wedge of territory held by the Germans known as the Saint-Mihiel salient. The assault lasted three days and was another overwhelming Allied victory. A few days later, American forces, now battle proven, joined the British and French for a major attack on the German army's defensive rear position – the Hindenburg Line.

> "Attacking the Hindenburg Line was seen as a suicide mission, but in 1918, that was exactly what they were ordered to do"

The Hindenburg Line was Germany's insurance policy. Built in the winter of 1916-17, it was intended to halt any Allied breakthrough, and its network of deep trench systems, bunkers, concrete pillboxes and tangle of barbed wire had already proved its invincibility during the Battle of Arras the previous year. For the average Allied soldier, attacking the Hindenburg Line was seen as a suicide mission, but in September 1918, that was exactly what they were ordered to do.

In the last week of that month, 123 Allied divisions consisting of about 500,000 men gathered for the onslaught. Foch demanded that his troops fight a fast, fluid action. The stalemate of trench warfare that

The final casualties

The men who were killed with just minutes to go

Augustin Trébuchon

Trébuchon was a runner with the 415th Infantry Regiment. At 10.45am on Armistice Day, he was halfway between Sedan and Charleville-Mézières when he was shot by a sniper. He'd been despatched to deliver a message to frontline troops that soup would be served at 11.30am in celebration of the ceasefire.

Private George Lawrence Price

Price was part of a Canadian patrol ordered to take the village of Harvré. Approaching it, they came under machine-gun fire. Assaulting the house where the fire had come from, Price's unit had been abandoned. When he stepped into the street to investigate further, a sniper killed him. It was 10.58am .

Sergeant Henry Gunther

On Armistice Day, Gunther's squad was ordered to destroy a roadblock defended by machine guns in the village of Chaumont-devant-Damvillers. In a last bid for a medal, Gunther single-handedly charged the position. Despite shouts from the Germans to stop, he ran at them, firing until he was shot at precisely 10.59am.

had turned the Western Front into a meat grinder for so many years would soon be a thing of the past. With ever more accurate artillery barrages destroying enemy defences, and with tanks and aircraft supporting, and even resupplying the infantry, Foch's ambition for a war of movement was quickly realised.

Despite suffering thousands of casualties, the Allies broke through the once-impregnable Hindenburg Line in just three days, capturing it on 29 September. It was a huge psychological blow to the Germans. Even Ludendorff, Germany's most bellicose commander, could see Germany's situation was desperate. He then argued that an armistice should be sought while his troops still retained some ability to inflict damage. At least that way, he hoped to bargain for a peace settlement that preserved German pride and perhaps its territory.

Back in January 1918, President Woodrow Wilson had proposed a 14-point peace plan that would have produced a peaceful solution for all sides. Rejected at the time, it now seemed an attractive proposition to the Germans, who approached the USA in the hope of getting it ratified. However, a lot had happened since January and the Americans were no longer interested in a compromise. If Germany wanted peace, they would have to pay for it, and before that conversation could even happen, the kaiser would have to go. To traditionalists like Ludendorff, the abolition of the German monarchy was totally unthinkable. Germany's army should fight to the death defending its kaiser, or so he believed, and so the olive branch was withdrawn. But Ludendorff's militaristic idealism was about to be undone by political pragmatism.

Men of the US 105th Field Artillery cheer for the camera after the armistice was announced

By mid-October 1918, the German home front was on the brink of collapse. The Allied naval blockade had cut off much of the country's food supply and its people were now starving. Riots – many of them left wing in flavour – were breaking out on German streets as the people challenged an authority that had led them to the brink of calamity. Germany's army was now too running short of supplies, while its navy was near mutiny. Then – on 26 October – the kaiser, under pressure from senior politicians, relieved the ever-loyal Ludendorff of his command.

On 8 November 1918, German and French negotiators met in a railway carriage in the French forest of Compiègne. The Allied delegation, led by Marshal Foch, whose own son had been lost in the war, were in no mood to negotiate. Without discussion, the vengeful Foch simply handed the Germans a list of 34 demands telling them they had 72 hours to agree or risk annihilation.

By the time the German delegation eventually returned to the railway carriage to sign the armistice in the early hours of 11 November, Kaiser Wilhelm had resigned and had fled to Holland where he would live out the rest of his days in exile. In the intervening three days, about 7,500 troops on all sides had lost their lives fighting in a war that was effectively over.

Both sides agreed upon and signed the armistice at 5am but – despite German requests for an immediate ceasefire – the Allies insisted that an end to hostilities should be delayed until 11am that morning, that way the word could reach all of its commanders. As the news broke across London, Paris and New York, jubilant crowds began to gather to celebrate. During the six hours between the signing and the ceasefire, however, there was to be a continuation of the killing.

Different units heard about the armistice at different times, and when the order was given, other than to cease hostilities at 11am, it was left to local commanders to decide how they'd spend what remained of the war. For some military commanders, it meant standing their troops down, and thanking them for their sacrifice. For others, however, it was a fast fading opportunity for glory.

As the countdown to peace began, artillery on both sides unleashed bombardments, as if to use up every last round of ammunition while they still could. Thousands of shells fell at random, killing and wounding men just hours from safety. One such bombardment was ordered by an American artillery captain who later wrote to his fiancé, "It's a shame we can't go in and devastate Germany, cut off a few of the German kids' hands and feet and scalp a few of their old men." The officer in question was future US President Harry S Truman, the man who would sanction the atomic bombings of Hiroshima and Nagasaki at the end of the World War II.

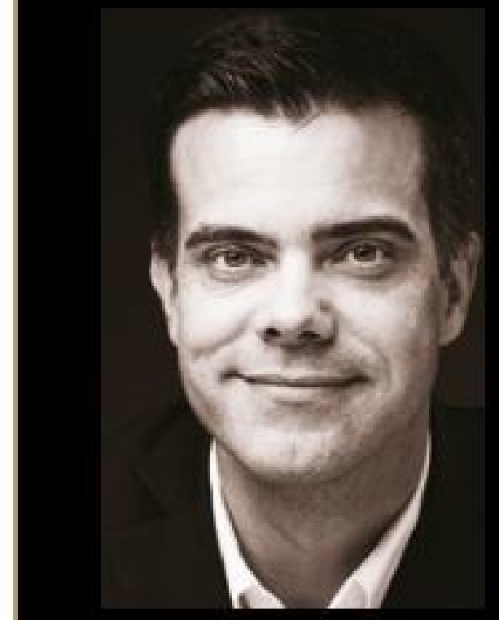
Elsewhere on the line, troops were being ordered into action for one last crack at the enemy. Men like Private Ellison, the Leeds coalminer and father of one was killed at 9.30am as the British army symbolically retook Mons to end the war – 700,000 British lives later – in the same place it had begun.

"It's a shame we can't go in and devastate Germany, cut off a few of the German kids' hands and feet and scalp a few of their old men"

Jubilant civilians and servicemen celebrate the end of hostilities in London

Anarchy after the armistice

Robert Gerwarth is a Professor of Modern History at University College Dublin, and director of the Centre for War Studies. His new book, the vanquished, explores the turbulent years in the aftermath of WWI



The Armistice of 1918 was the end of hostilities between the Great Powers, but was there still open conflict between certain states after 11 November?

While 11 November brought peace to the principal victor states of the Great War – France, the US, and Britain (minus Ireland) – the same cannot be said about the defeated, or indeed about Greece and Italy. For much of Europe, notably in its eastern half, the Great War was followed between 1918 and 1923 by a series of vicious inter-state wars, civil wars and other episodes of ethnic violence, killing more people than the combined wartime casualties of Britain, France and the US.

To what extent did the 'victors' of World War I exacerbate unrest and conflict across the continent between 1917-23?

The influence that the Western peacemakers in Paris in 1919 had over large swathes of territory in Eastern Europe has, perhaps, been exaggerated. The Western Allies had no meaningful military presence in that part of the world and could not call off the conflicts in the same way that hostilities could be brought to a halt in the west on 11 November 1918. That said, one of the most dangerous (though initially idealistic) concepts of the time was US President Woodrow Wilson's promise of national self-determination for the successor states of Europe's continental empires.

In 1918-19, Europe was fundamentally transformed from a continent dominated by land empires to a collection of new 'nation-states' that aspired to ethnic exclusivity while simultaneously being every bit as multi-ethnic as their imperial predecessors. Aggrieved minorities within these new nation-states were a distinctly radicalising force in European politics for the next three decades. In retrospect, one has to acknowledge that the multi-ethnic empires of Europe – though far from perfect – were better at dealing with the remarkable ethnic complexity of east and central Europe than the nation-states of subsequent decades. One obvious example here is that of the Jews of the Habsburg Empire. Up until 1918, they had been offered legal equality and security, but after the end of the Habsburg Empire, Jews were accused of being 'community aliens' or supporters of Bolshevism, and as such they were often violently persecuted.

One could also argue that the peace treaties of Paris, imposed on the democratic successor states of the defeated Central Powers, did little to appease revisionist nationalism in those countries. The democratic revolutions in central Europe of 1918-19 were henceforth associated by the political right with the defeat of 1918 and the 'dictated' peace treaties, which they had to accept. The democrats of Germany, Austria, Bulgaria and Hungary had not been responsible for the outcome of the war, but that did not matter in the public perception.

Why were the Great Powers unwilling to intervene in subsequent conflicts, such as the Soviet-Polish War? What could the consequences have been had they done so?

Neither Britain nor France had any appetite for major military interventions after the horrors of the Great War. When the Americans proposed to march on Berlin and finish the war with a decisive victory, neither the French nor the British felt that a costly invasion of Germany proper could be communicated to their populations after four years of death and hardships. The home fronts would have had even less sympathy for military engagement in Eastern Europe. There was popular support in both countries for an independent Poland (if only to check German power from the east), but not at the price of more British or French soldiers' lives.

Both countries did intervene in the Russian Civil War, on the side of the 'whites', but the intervention forces were small in size and did not change the outcome (Lenin's ultimate victory in the Russian Civil War).

Lloyd George was also instrumental in escalating the Greco-Turkish War by encouraging Greek Prime Minister Venizelos to land in the western Anatolian port city of Smyrna, which had a Christian majority among its population. The result was a disaster, as Turkish nationalists under the leadership of Mustafa Kemal rallied in response to the Greek invasion.

After an extremely brutal three-year war, which saw countless atrocities on both sides, the Turks re-took Smyrna amid much bloodshed. This was followed by the Great Population Exchange – the involuntary expulsion of well over 1 million Christian Ottomans and Greek Muslims, that set a dangerous precedent for a century of expulsions.

What in your opinion was the key event preventing universal peace during the years following the Armistice and why?

The continuation of violence in many parts of Europe had several causes, but it is clear that three of them are particularly important throughout the continent. The first cause is the way in which World War I destroyed old structures without replacing them with stable new ones.

The Great War – a conflict between states, largely fought on military fronts – became the unintentional enabler of different, and ultimately even more ungovernable, forms of violence by leaving huge power vacuums in large parts of the continent. Power vacuums in which rival political and ethnic groups fought against each other over the future form and shape of the states that should succeed the collapsed land empires.

The dismantling of the land empires – and this is the second root cause of the violence that escalated in Europe after 1918 – and their replacement with aggressively insecure nation-states was something that was only adopted as an Allied war aim in early 1918. From our vantage point today, it is clear that the history of many of those successor states until 1945, was not an unqualified success story.

Thirdly, it is impossible to write a history of the post-war conflicts without mentioning the effects of the Bolshevik Revolution of 1917 on both Russia and the rest of Europe. The successful coup of a relatively small group of Bolsheviks meant that – for the first time since the French Revolution of 1789 – a radical revolution had triumphed in one of Europe's principal states. The knock-on effects were enormous: on the political left, Lenin's October Revolution was seen as an inspiration, a model that was to be followed.

On the political right, the Russian Revolution was seen as the realisation of the worst nightmare: the triumph of the working classes over the old established order, the abolishment of private property and upper class privilege.

Even in countries that were not threatened by a Communist revolution, the post-war years saw a massive mobilisation of groups of the right, determined to destroy Bolshevism. The sometimes abstract and concrete fear of Bolshevism had an impact on interwar Europe, and neither Mussolini's ascent or that of Hitler can be explained without that historical backdrop.

THE VANQUISHED
WHY THE FIRST WORLD WAR FAILED TO END, 1917–1923
ROBERT GERWARTH

Turkish soldiers wait in their trenches, ready to engage the Greeks during the Greco-Turkish war of 1919-1922

Robert Gerwarth's new book, The Vanquished, is published by Allen Lane

Images: Alamy, Getty, TopFoto

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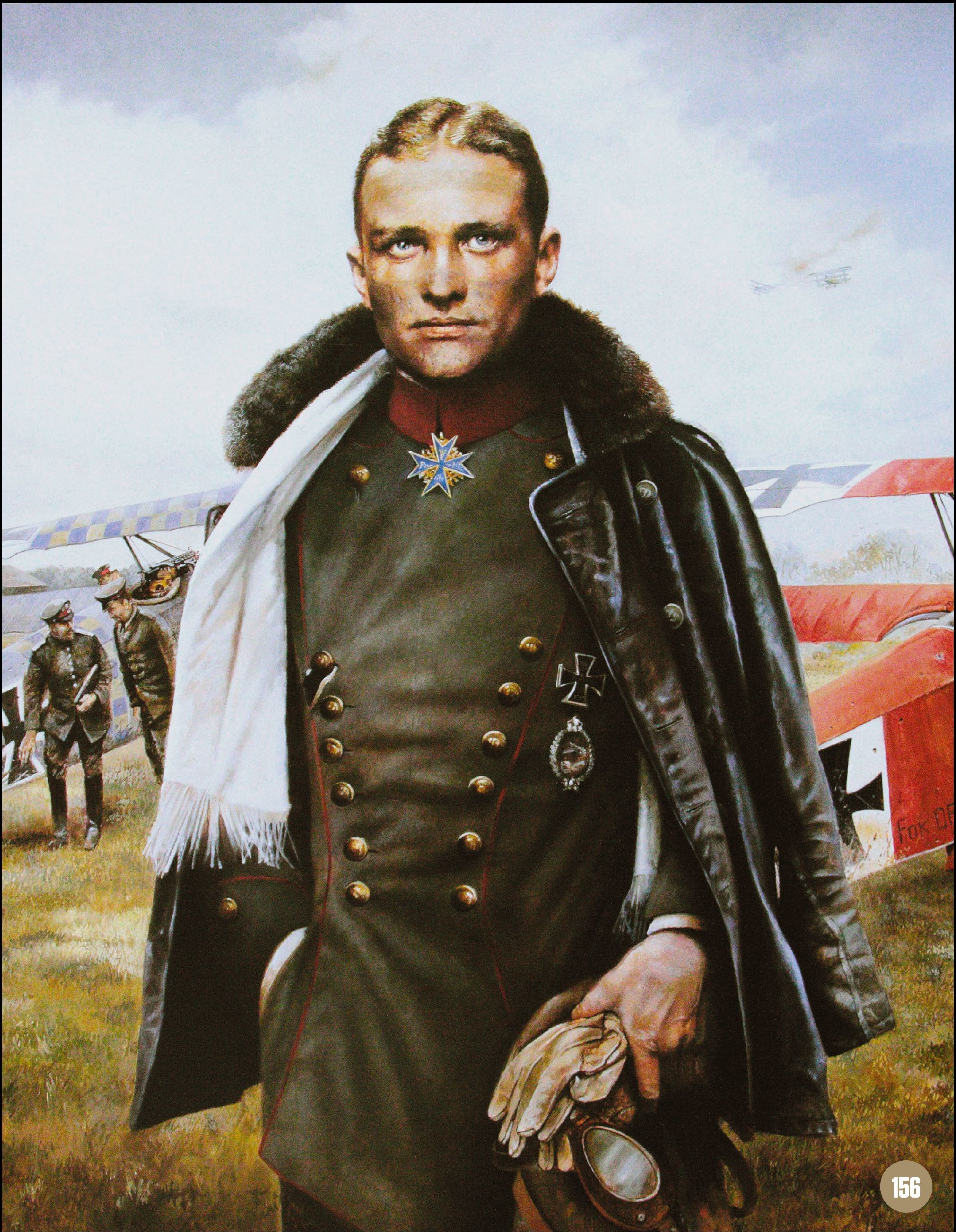

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Legendary leaders of World War I

Top leaders during the Great War let nothing stand in their way, not the enemy, not rivals, not even allies, in their quest for victory. Some were forced to step down, but others soldiered on – unstoppable to the end

Written by William E. Welsh

The Western Front served as the cockpit of the Great War, and it was on that front that the outcome of the conflict was decided. Each of these ten key figures bore momentous responsibility for the fate of their respective countries during the Great War.

Nine of the ten prominent figures profiled herein were directly or indirectly involved in supporting the Western Front operations of their respective nations or empires. Six of the ten key figures were either commanders-in-chief or chiefs of the general staff. Depending on the exact scope of their job and their nationality, these generals bore various titles, but their work was similar in many respects. Their jobs required a deep familiarity with the demands of logistics and mobilization, a thorough understanding of modern strategy and tactics, and strong leadership and diplomatic skills.

These high-ranking commanders were Joseph Joffre, Ferdinand Foch, Douglas Haig, John J Pershing, Paul von Hindenburg, and Erich Ludendorff. Each leader bore an immense weight on his shoulders. They were responsible for their country's victory or defeat and for the fate of millions of soldiers lives they held in their hands.

Although he did not lead Russia's war effort until after Tsar Nicholas II's abdication, General Aleksei Brusilov conducted an offensive of such great renown in 1916 that it bears his name to this day. Brusilov found a way on the Eastern Front to avoid egregious casualties in a successful, large-scale attack against the Austro-Hungarian army. The attack so unravelled the Austro-Hungarian military leadership that in its aftermath the German supreme command stepped in and led its forces for the remainder of the war.

Statesmen such as German Emperor Kaiser Wilhelm II, British Prime Minster David Lloyd George, and US President Woodrow Wilson are included because of the role they played not only in galvanizing their people behind the war effort, but also for marshalling the war industries necessary to prosecute the war.

Nearly all of these key figures are household names. Each left his unique and indelible stamp on the course and outcome of the war.

Kaiser Wilhelm II aspired to be a great general but lacked the slightest degree of military genius

Kaiser Wilhelm II

Nationality: **German** **Position:** **Emperor**

Kaiser Wilhelm II pushed Europe into total war with scant appreciation for the great harm it would cause the continent

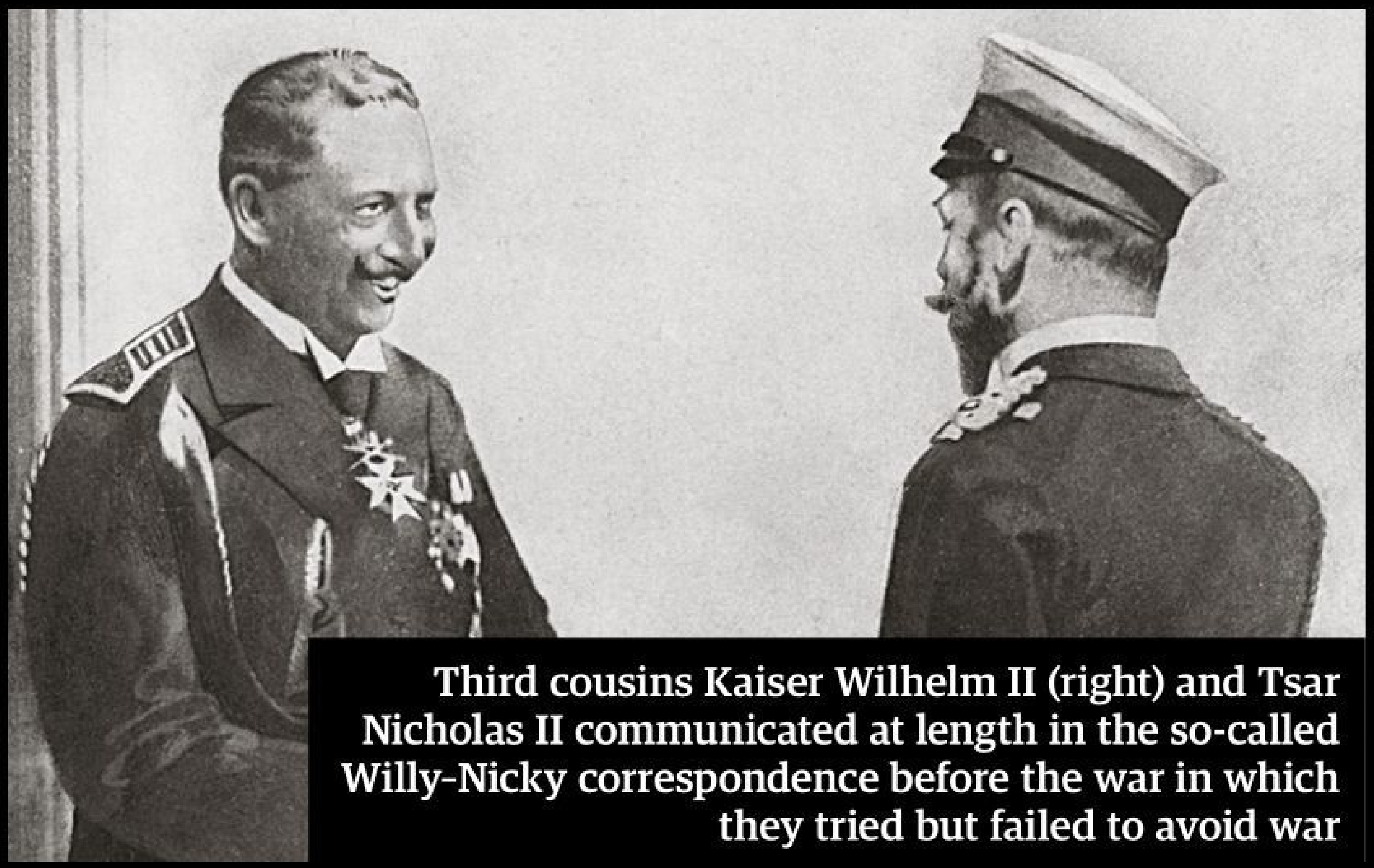
Kaiser Wilhelm II stood at the head of the most efficient army at the outset of World War I with 3.8 million men under arms. Yet he was devoid of any appreciable talents as a military commander. "All he wished was to feel like Napoleon, to be like him without having to fight his battles," said Winston Churchill of the Kaiser.

The vain, bellicose, paranoid and recklessly confrontational German emperor had by the outbreak of the war not only alienated foreign leaders, but also his own ministers and generals. His antics on the world stage would have been comical if he had not pushed the world to the brink of war. He sought to carry forward the Prussian military tradition but proved woefully incompetent as a strategist.

His political aim in the years leading up to World War I, was the fulfilment of Weltpolitik, the foundations of which were the acquisition of overseas colonies, creation of a global navy, and aggressive diplomacy. He was complicit in the unchecked rush to war in the wake of Austrian Archduke Franz Ferdinand's assassination in June 1914.

Once Germany became bogged down in a protracted, two-front war, he strived to influence German military operations, but his advice was disregarded at the outset of the war by Chief of the General Staff Helmuth von Moltke and Chancellor Theobald von Bethmann-Hollweg. Like a child he could not stick consistently to one sound strategy, but vacillated back and forth between eccentric military policies and the desire to make peace overtures to Germany's enemies.

He eventually alienated so many of his generals that by 1916 he found himself with no choice but to accept the so-called Silent Dictatorship of Paul von Hindenburg and Erich Ludendorff. When Germany failed to achieve victory, they ordered him to abdicate and accept exile in The Netherlands. No longer having any real power, he meekly complied.



Third cousins Kaiser Wilhelm II (right) and Tsar Nicholas II communicated at length in the so-called Willy-Nicky correspondence before the war in which they tried but failed to avoid war

Paul von Hindenburg

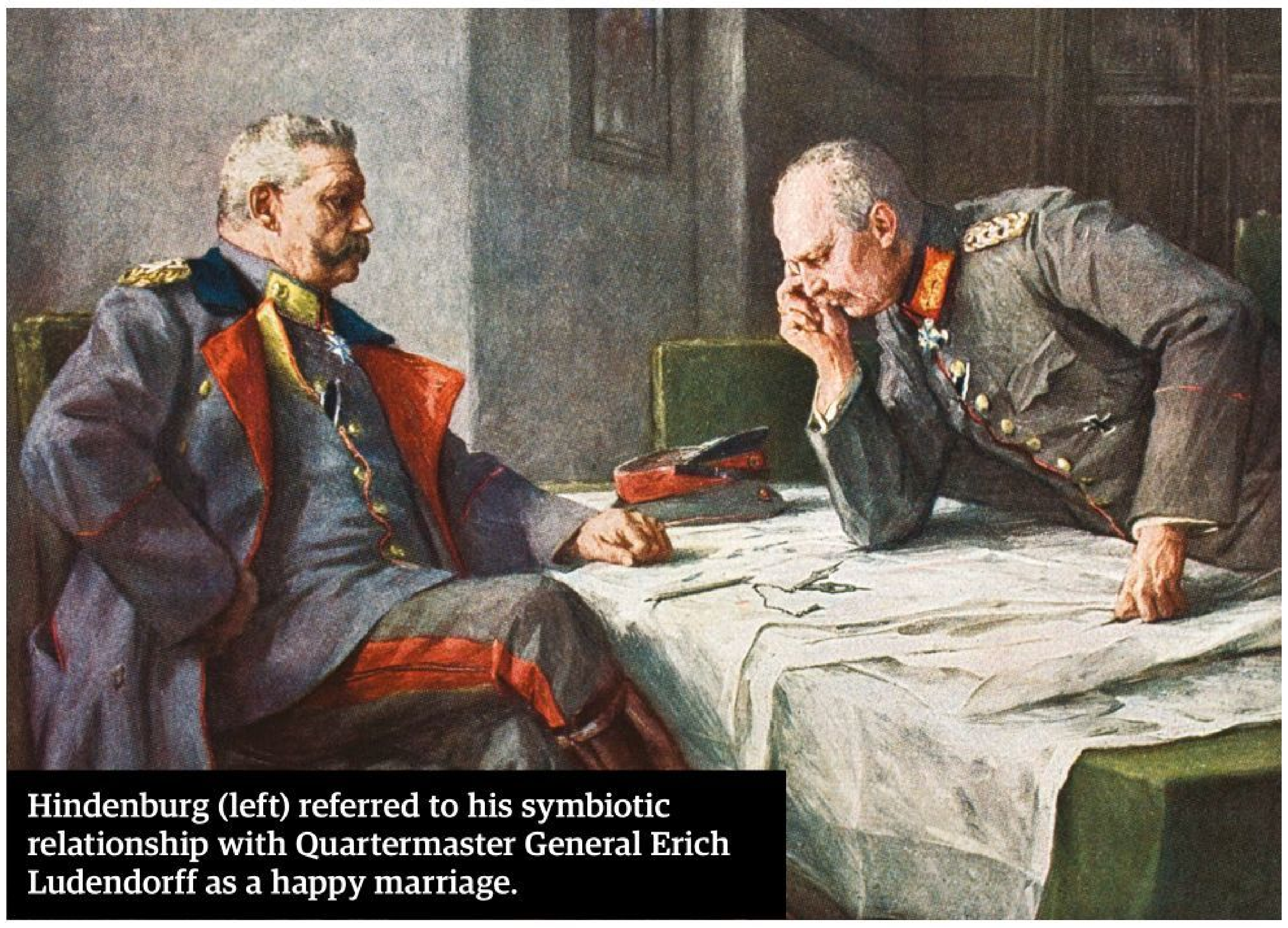
Nationality: German
Position: Chief of the German General Staff

Paul von Hindenburg rescued Germany in an early hour of great need, but failed it over the long haul with a bankrupt strategy of total war

More than 220,000 Russians were marching into the rear of the Germany army on the country's eastern frontier in August 1914 just two weeks after the start of the war. It was a dire situation. Called from retirement at the age of 65, Prussian-born General Paul von Hindenburg boarded a special train and rode with his new chief of staff General Erich Ludendorff straight to the endangered front. Together they masterminded the German victory at Tannenberg that annihilated the Russian Second Army. The victory catapulted Hindenburg into the pantheon of Germany's greatest war heroes.

Hindenburg personified the Prussian military tradition. Promoted to field marshal following Tannenberg, he assumed control of all German forces on the Eastern Front in autumn 1914. Dignified, confident, and calm he stepped forward to manage a complex war on two fronts. Hindenburg became a grandfather figure to the Germans. With his right-hand-man Ludendorff with whom he was "one in thought and action," to quote his own words, Hindenburg ascended to a "silent dictatorship" in which he enjoyed power that rivalled that of the Kaiser.

Following his promotion to field marshal, a power struggle ensued with German Chief of the General Staff Erich von Falkenhayn over military priorities. Hindenburg ultimately replaced Falkenhayn in the key post in August 1916. From that point forward, Hindenburg instituted plans and initiatives that were manifestations of his belief in total war. These included the armaments program that bore his name, unrestricted submarine warfare, and the spring offensive of 1918. Rather than carry Germany to victory, these failed efforts revealed an overall lack of sound strategy and political skills found in the great commanders of history. In the end, he failed the soldiers and citizens of Germany.



Hindenburg (left) referred to his symbiotic relationship with Quartermaster General Erich Ludendorff as a happy marriage.

Douglas Haig's air of superiority intimidated subordinate officers who were afraid to question his plans

Douglas Haig

Nationality: **British**
Position: **Commander in Chief, British Expeditionary Force**

Douglas Haig tried unsuccessfully over the course of the war to break through German defences on the Western Front running up high casualties in the process

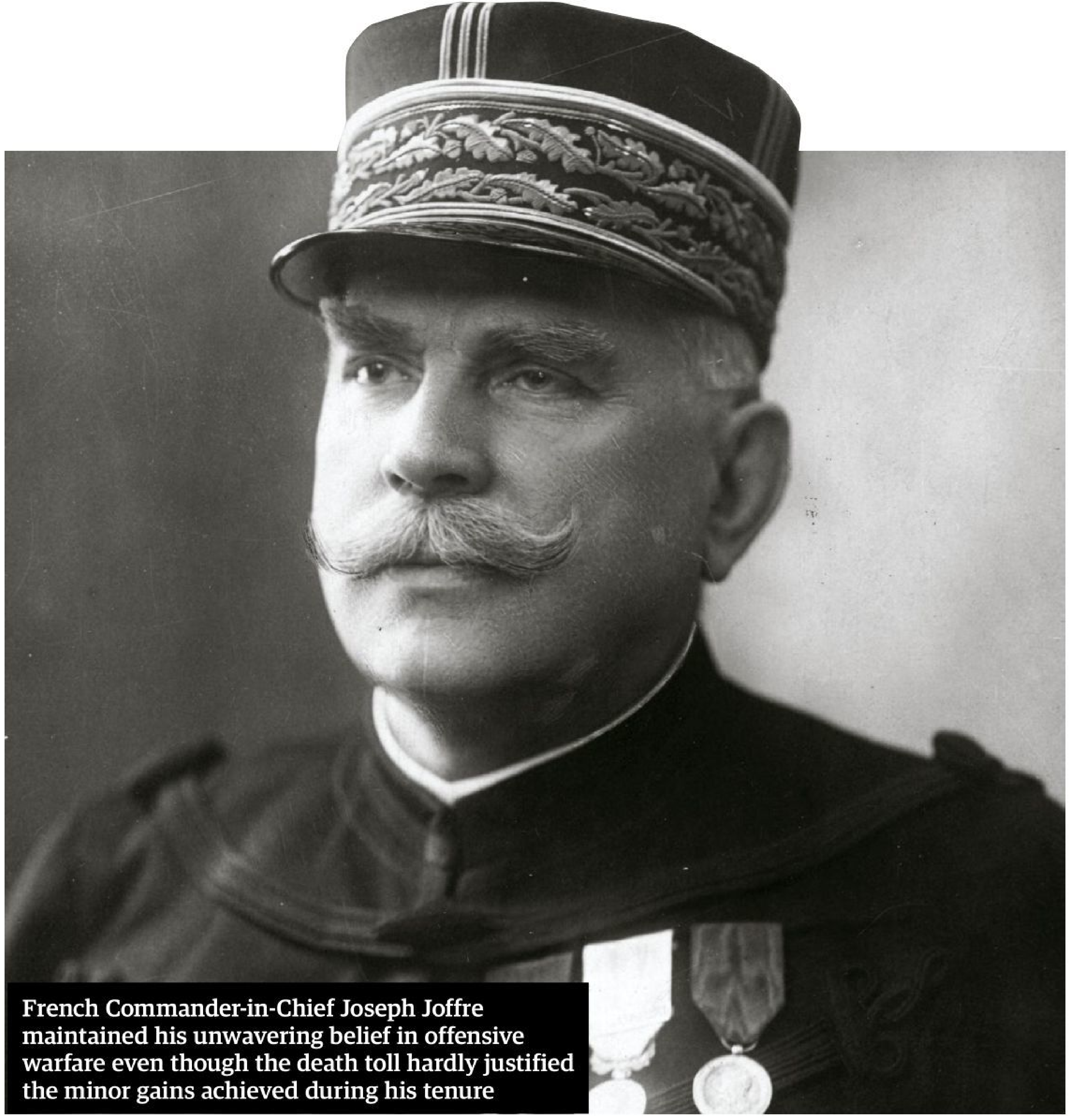
First Army commander Lieutenant General Douglas Haig desperately wanted his forces to achieve a breakthrough at Loos in northern France in September 1915. He threw his reserves in on the second day, but the Germans already had reinforced their positions and it was a missed opportunity. The experience is a metaphor for the breakthrough that always seemed to elude Haig.

Climbing the ladder to the top, Haig was more than willing to knock others out of the way. He blamed the failure of British forces at Loos on Field Marshal John French, and Haig succeeded him in December 1915 as commander-in-chief of the British Expeditionary Forces. Like other generals, he underwent many hard lessons in tactics during the Great War.

On the positive side, Haig was optimistic, unflappable, and focused. On the negative side he was aloof, arrogant, and combative. A trained cavalry officer, he clung to the idea that mounted troops could exploit a breakthrough. To his credit, though, he was open to some of the new weapons such as tanks. He used them in the Somme offensive of 1916, but in numbers too small to make a difference.

At the Somme, and again a year later at Passchendaele, he simply did not know when to abandon a failed offensive. He continued to feed men into the meat grinder of trench warfare when he should have quit months earlier. The British and commonwealth forces suffered 420,000 and 260,000 casualties, respectively, at Somme and Passchendaele. This alone was reason enough for the sobriquet 'Butcher Haig'.

The wheels of victory began to turn in 1918. The British surged forward in the Hundred Days offensives in the second half of 1918. Haig had real staying power, and he was still in command on Armistice Day.



French Commander-in-Chief Joseph Joffre maintained his unwavering belief in offensive warfare even though the death toll hardly justified the minor gains achieved during his tenure

Joseph Joffre

Nationality: **French** **Position:** **Chief of the General Staff**

Joseph Joffre directed the French forces on the Western Front with steadfast determination maintaining an active defence against the unrelenting German onslaught

French Chief of Staff General Joseph Joffre's was a die-hard believer in carrying the fight to the enemy. His bull-headed approach to launching repeated offensives with little appreciable success throughout the first two years of the Great War would ultimately lead to his replacement.

As the Germans gained the initial advantage on the Western Front by launching a surprise attack on Belgium that allowed them to push as far as the Marne River in northwestern France, Joffre put plan XVII in effect, which called for the French to "advance with all forces united" against the Germans.

Joffre's first attack against the Germans on the fourth day of the war failed. To consolidate their line, the French withdrew during the so-called Great Retreat of late August. Joffre's finest hour orchestrating French forces came during the subsequent First Battle of Marne. Sticking to his pledge to attack at all costs, Joffre launched a sweeping counterattack, in concert with the British, on September 5-6 that involved six French field armies. The bold gamble hurled back the Germans.

Joffre was an eternal optimist. At a time when the horrific casualties experienced on the Western Front tried lesser generals' souls, Joffre remained steadfast and confident despite repeated setbacks. Importantly, he never lost the confidence of his troops, who affectionately dubbed him Papa Joffre.

Criticism against Joffre mounted during the year-long German offensive at Verdun in the third year of the Great War. Joffre initially failed to appreciate the depth and breadth of the German assault. Outnumbered and outgunned, Joffre was unable to pull off a successful counterattack.

At the end of the epic battle, the French government replaced Joffre on 13 December 1916. He retired with honour, receiving the title of marshal of France as he passed the baton to Robert Nivelle.

Minister of War David Lloyd George and First Lord of the Admiralty Winston Churchill in October 1915. Lloyd George's masterful handling of wartime production and logistics offset his strategic naivete

David Lloyd George

Nationality: **British** **Position:** **British Prime Minister**

Although the Liberals traditionally opposed war, Lloyd George understood the importance of defending his nation from aggression

Even though Britain's Liberal Party, of which British Chancellor of the Exchequer David Lloyd George was a member, traditionally opposed war, Lloyd George was willing to break tradition in the face of German aggression. "Britain should at all hazards maintain her place and her prestige amongst the Great Powers of the world," he said in 1911.

After serving seven years in that office, he became Minister of Munitions in May 1915, and then took over as Secretary of State for War in July 1916 upon Lord Kitchener's death. In these important cabinet positions, he persuaded British businessmen to convert factories to producing arms, ammunition, and equipment essential to the war effort.

When he replaced Asquith as prime minister of Britain in December 1916, Lloyd George used his increased powers to centralise wartime production. As a result, British industry and commerce were harnessed in support of Britain's military forces.

The wheels of government turned smoothly for Lloyd George on the home front, but he was stymied in his efforts to influence Britain's battlefront strategy. Lloyd George had a deep-seated distrust of generals, and they in turn regarded him as incompetent when it came to war strategy.

Lloyd George favoured increasing British forces in alternate theatres, such as Italy and Greece, to avoid the heavy casualties incurred on the Western Front. For that reason, he objected to Commander-in-Chief Douglas Haig's plans for a major offensive in summer 1917. Haig and Chief of the Imperial General Staff William Robertson would not take his advice. Lloyd George reluctantly agreed to allow Haig to proceed with the Third Battle of Ypres. After the armistice, Lloyd George served as the senior member of Britain's delegation to the Paris Peace Conference.

Erich Ludendorff

Nationality: **German**
Position: **Quartermaster General**

Erich Ludendorff masterminded German's strategy of total war, unleashing a powerful offensive in spring 1918 in an attempt to achieve a victory on the Western Front

Overbearing, belligerent, and arrogant, Erich Ludendorff waged internal war against his rivals in the German army with the same vigour that he waged war against Germany's foes in World War I.

Because of his deep knowledge of the Schlieffen Plan, Ludendorff was assigned to accompany the German Second Army as it swept into Belgium in 1914. He won early fame when he compelled the Liege citadel to surrender.

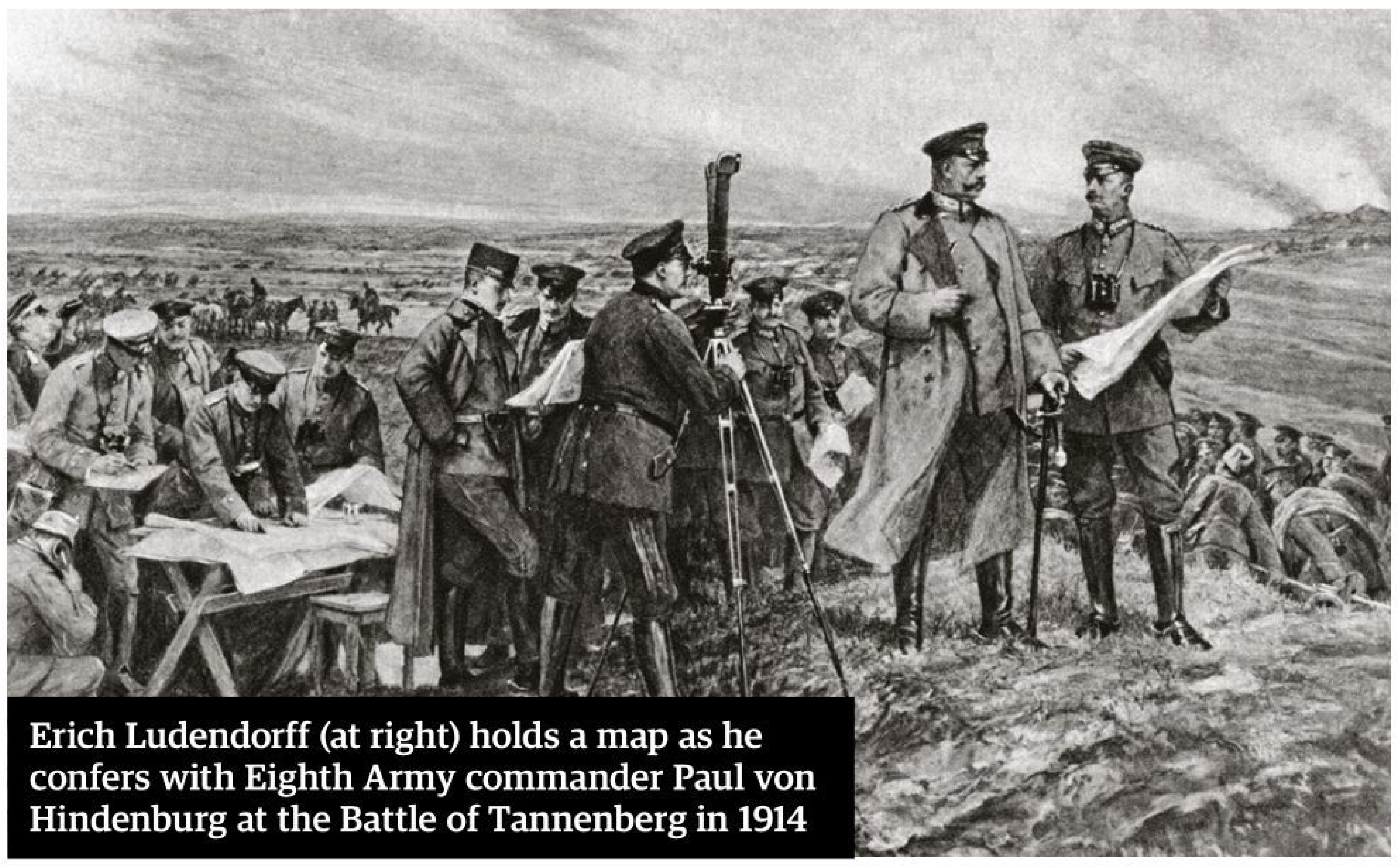
The German supreme command then appointed him to serve as chief of staff to General Paul von Hindenburg, who they recalled from retirement to stave off disaster on the Eastern Front. Ludendorff aided Hindenburg in reversing the situation by defeating the Russians at Tannenberg in late August.

Ludendorff clashed repeatedly with German Chief of the General Staff Erich von Falkenhayn. Each had his own idea of how to prosecute the war, and the two ideas did not mesh. Ludendorff unsuccessfully tried to get Kaiser Wilhelm to sack Falkenhayn. When that failed, Ludendorff went around the Kaiser and convinced politicians and industrialists to call for Falkenhayn's resignation. This effort succeeded, and Falkenhayn was fired in August 1916.

Hindenburg and Ludendorff became virtual dictators of Germany in the second half of the war. They embarked on a policy of total war, which brought the Americans into the war tipping the balance in the Allies' favour.

Ludendorff directed the series of attacks in 1918 known as Kaiserschlacht, the Spring Offensive, which targeted the British and Portuguese expeditionary forces in the Flanders Sector. The French reinforced the British, but not before the Germans had driven the Allies to the Marne. Allied counterattacks led to an armistice.

After the war, Ludendorff did Germany the disservice of circulating the so-called stab in the back theory that German was defeated by villainous traitors from within rather than on the battlefield.



Erich Ludendorff (at right) holds a map as he confers with Eighth Army commander Paul von Hindenburg at the Battle of Tannenberg in 1914

[redacted]

General Aleksei Brusilov restored Russian honour following the defeats of 1914 with a successful offensive two years later that bears his name

Aleksei Brusilov

Nationality: **Russian**
Position: **Commander-in-chief, Russian Provisional Government**

Brusilov led a Russian offensive that was a spectacular success against Austria-Hungary showing that it was possible to capture territory without appalling casualties

Russian General Aleksei Brusilov showed great promise at the outset of the war while leading the Russian Eighth Army on the Eastern Front. His army penetrated the Austro-Hungarian frontier positions in Galicia, outstripping the progress of other Russian armies. For this achievement, Tsar Nicholas II promoted Brusilov to four-star general in 1915, and he was given command of the Southwest Army Group.

When the Russian northern armies were getting ready to launch an offensive against Germany in summer 1916 to coincide with the Somme Offensive on the Western Front, Brusilov volunteered to lead his forces in a simultaneous attack. The Russian general staff gave him permission to participate in the offensive.

Brusilov had studied the challenges presented by trench warfare and devised a way that he believed he could overcome the difficulty of capturing and holding ground in trench warfare. Rather than mass all of his forces for a breakthrough in one small area as most commanders did, he planned a general attack along the entire length of the enemy's front. The goal was to stretch the enemy's defences to the breaking point.

Brusilov unleashed four Russian armies totalling 500,000 men against the Austro-Hungarian positions on June 4, 1916. The well-led Russians overran the enemy's frontline trenches. By the end of the first week, Brusilov's troops had in some places penetrated 40 miles from their starting point.

When the offensive was over in September, Brusilov's Russians had inflicted 600,000 casualties on the Austro-Hungarian army, and compelled another 400,000 to surrender. The Brusilov Offensive, as it became known, resulted in a leadership crisis for the Austro-Hungarian army. After the debacle, the Germans took control of the Austro-Hungarian army.

In March 1917, Brusilov was appointed commander-in-chief of the Provisional Government that replaced the failed Tsarist regime.

18+

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Ferdinand Foch

Nationality: **French**
Position: **Supreme Allied Commander**

Ferdinand Foch was a master commander with extensive experience in front-line fighting who rose to the position of supreme commander on the Western Front

Field Marshal Ferdinand Foch rose steadily up the ladder of command. He started the war as a corps commander and before the war was over he became supreme allied commander. Foch's strengths far outweighed his weaknesses and that had much to do with his success at the upper echelons of command.

Soldiers and fellow generals admired him because he was a fighter at heart, with plenty of fire in his belly. He proved on multiple occasions throughout the war that he was a master of the counterattack. He was optimistic, diplomatic, and inspiring.

French Generalissimo Joseph Joffre took Foch under his wing, and during that time he rose to command of the French Northern Army Group in 1915. During the Somme Offensive of 1916, his troops advanced further than the British. Horrified by the staggering casualties of the offensives on the Western Front, he advocated so-called scientific warfare that relied on new technologies, such as tanks, to help offset high casualties among front-line forces.

Foch's career suffered a key setback in December 1916 when General Robert Nivelle replaced Joffre. While Nivelle was in power, Foch languished in small roles. But he returned to the limelight when General Philippe Petain replaced the incompetent Nivelle in May 1917.

From there, Foch rocketed into the stratosphere. He led reinforcements into Italy to shore up the sagging Italian front following the German victory at Caporetto in late 1917. Afterwards, Foch was promoted to supreme allied commander in March 1918, which put him above all other generals on the Western Front.

As supreme Allied commander, he set the strategic goals for the Allies in the West and directed national armies to parry each blow of the enemy. During this time, he used his diplomatic chops to reign in the headstrong American General John J Pershing. At the end of the war, Foch negotiated harsh terms for Germany. After four long years fighting the Germans, he was in no mood to be merciful.

Ferdinand Foch believed harsher terms should have been imposed on the Germans at the Paris Peace Conference of 1919

John J Pershing

Nationality: **American**
Position: **General of the Armies of the United States**

Pershing sought autonomy for the American forces on the Western Front and lead a major offensive

US President Woodrow Wilson believed Major General John 'Black Jack' Pershing had the right stuff to lead the American Expeditionary Force to France. He was a trustworthy general, an excellent administrator, and a superb combat commander.

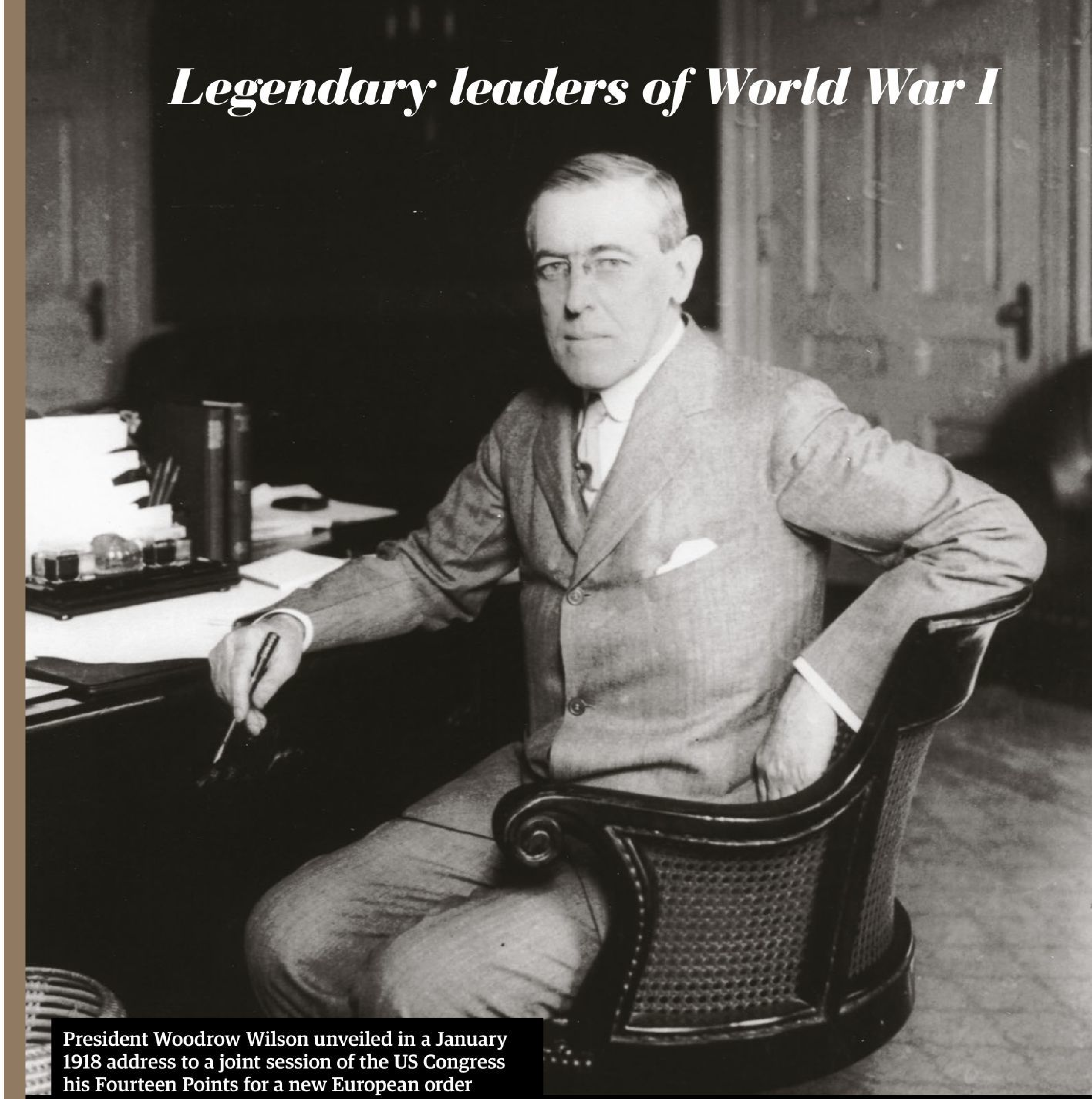
Pershing insisted that his troops fight as an autonomous US national army as opposed to being divided up as reinforcements for the French and British armies. The first Doughboys, as the allies called the US soldiers, arrived in France in June 2017. To put Pershing on par with the other national commanders, the US Army promoted him to full general three months later. The American units, which had to undergo rigorous training before they would be ready for the cauldron of battle, were held in reserve until fully trained.

The fury of the Kaiserschlacht compelled Pershing agree to allow individual US divisions to go into battle piecemeal to prevent the Germans from achieving a breakthrough on the Western Front. By then, Pershing had four US divisions ready. Pershing's Doughboys proved they were superb soldiers in a series of battles in the summer of 1917, which included Cantigny, Belleau Wood, and Château-Thierry.

Foch allowed Pershing to lead his entire army in an independent attack against the German 5th Army in September 1918 in what became known as the Saint-Mihiel Offensive. The Americans fought alongside the French in the Meuse-Argonne offensive suffering heavy casualties.

Pershing believed that unless the German civilians experienced the horror of war first-hand on their own soil, they would not be sufficiently cowed. He favoured unconditional surrender and an invasion of Germany if necessary to achieve that goal. Because of his obduracy, he was excluded from the Paris Peace Conference.

Pershing (right) and Supreme Allied Commander Ferdinand Foch clashed repeatedly over how the Americans would be used in battle on the Western Front


President Woodrow Wilson unveiled in a January 1918 address to a joint session of the US Congress his Fourteen Points for a new European order

Woodrow Wilson

Nationality: **American** **Position:** **President**

Woodrow Wilson marshalled US resources in support of the Doughboys, but ran into difficulties trying to get his idealistic principles adopted at the peace table

"The present German submarine warfare against commerce is a warfare against mankind," US President Woodrow Wilson said in his War Message to the US Congress on 2 April 1917.

When German Chancellor Theobald von Bethmann-Hollweg announced less than three months earlier that Germany would pursue a policy of unrestricted submarine warfare, Wilson saw it was time to end American neutrality. The German decision proved a costly mistake for it brought 4.5 million American soldiers and sailors into the war against Germany.

Once he made the decision to go to war against Germany, Wilson threw all his energy into defeating it on the Western Front. With the support of Congress, Wilson instituted compulsory military service, took control of war industries, and controlled the production and distribution of food.

Wilson did not behave like a team player, though, when it came to the United States' military strategy against the German Empire. Specifically, he never agreed to a joint plan with Britain, France, and Italy.

Wilson was an optimist and a visionary. He had a burning desire to shape the post-war world. Wilson set forth his vision in the form of the famous Fourteen Points, a statement of principles that he published in January 1918.

The Germans naively thought that they might achieve leniency from Wilson because of his espousal of fairness, but they were wrong. Wilson deeply despised German militarism, and he was not about to let the Germans remain a threat to European peace.

The 1919 peace conference was marred by heated arguments over the provisions among the senior members of the delegations from France, Britain, Italy, and the United States. In the end, Wilson had to compromise, which meant abandoning many of his idealistic principles, but the conferees did adopt his proposal for a League of Nations.

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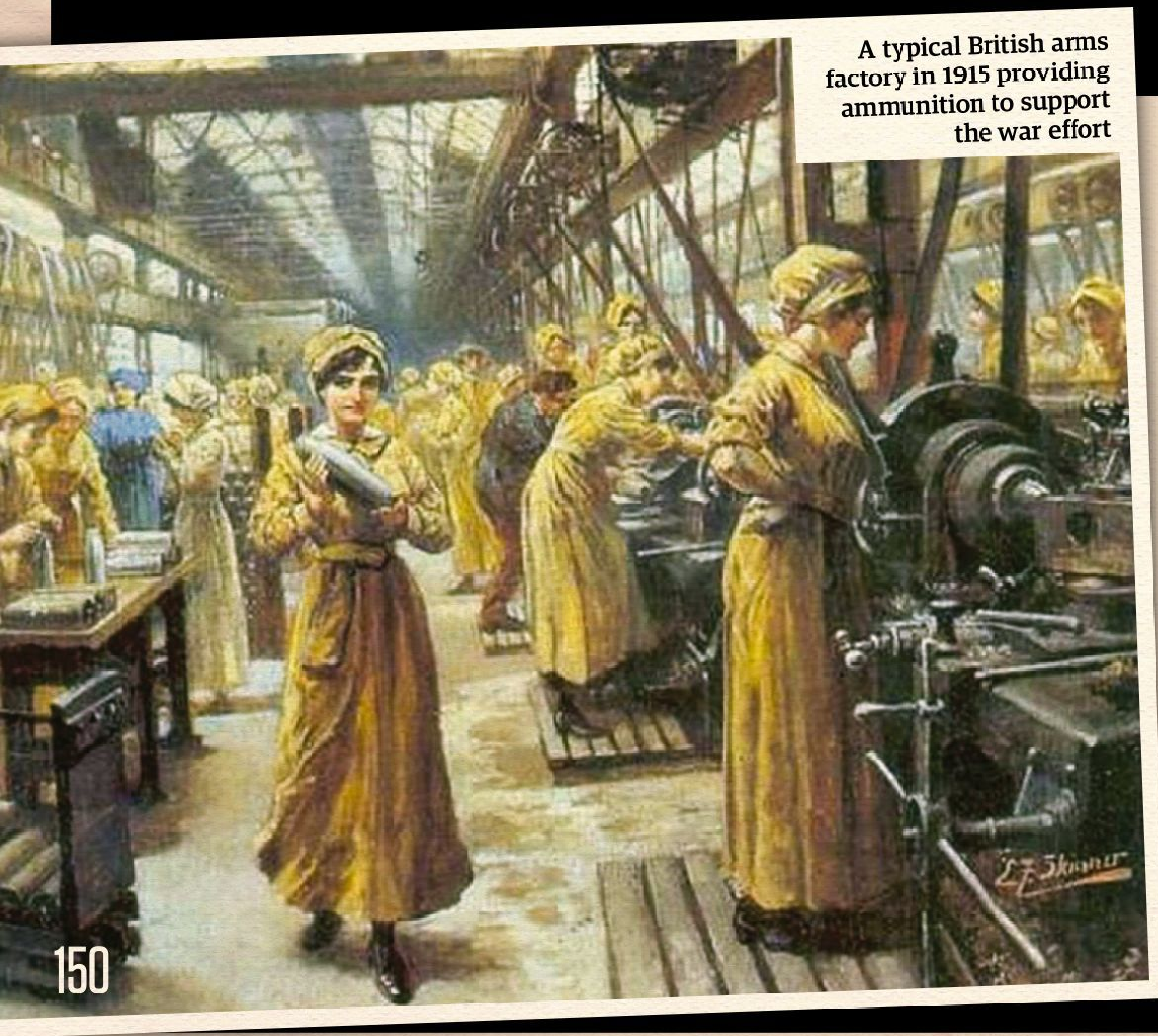
15 THINGS YOU PROBABLY DIDN'T KNOW ABOUT WOMEN IN WORLD WAR I

While the men were away fighting on the front line, Britain's unsung heroes stood up to be counted



A typical British arms factory in 1915 providing ammunition to support the war effort

80 PER CENT OF WEAPONS USED BY THE BRITISH ARMY WERE MADE BY WOMEN

1

The war had a profound effect on a woman's role in the workplace. On the eve of the war, approximately 30 per cent of the nation's workforce was female and the majority worked in textile manufacture. This changed entirely as the war stepped up a gear and the need for munitions production increased drastically. It wasn't just shell production that boomed though. The number of women in the transport industry increased by a huge 555 per cent as women helped roll vehicles off the production line and into the warzones of World War I. Without this invaluable help, events such as the shell crisis of 1915 would surely have been worse and might even have happened again. The female input was so great that by 1917, 80 per cent of weapons used by the British Army had been made by Britain's new army of women workers.

EXPOSURE TO TNT COULD TURN THE WORKERS YELLOW

2

The munitions industry was big business, and workplace hazards only increased as the factories grew. One of the worst was the effect that explosive agent trinitrotoluene (TNT) had on anyone who worked with it. The explosive of choice for the British Army's cannons, TNT was produced in its droves. During its production, it was frequently handled by women who came to be known as 'canary girls', as exposure caused a condition called toxic jaundice that turned skin yellow. These workers had no protective clothing, and safety measures were often inadequate. Tragically, more than 400 women died from overexposure to TNT during the war. However, TNT wasn't the only danger. The lack of safety concerns and the handling of explosive materials was a dangerous mix, resulting in explosions in the factories. At Chilwell in Nottinghamshire, 134 people died in a blast that levelled the entire complex.

The creation of munitions was a dangerous task but essential for British artillery

The WLA was such a success that it was pressed into action once again during World War II

THE WOMEN'S LAND ARMY HELPED SAVE BRITAIN FROM FAMINE

3

As Germany threatened Britain's supremacy on the seas, starvation through a naval blockade became a dangerous possibility. To last out the war, Britain had to become more self-sufficient. The Board of Agriculture set up the Women's Land Army (WLA) in 1915, employing women to work the land, drive tractors, and plough and drain fields. The working week could be up to 50 hours long and each worker was paid £1.12 per week. After a poor harvest and destruction of supply vessels by German U-boats in 1917, famine loomed as Britain was down to its last three weeks of food reserves. However, starvation was averted and rationing was introduced in London in early 1918. More than 200,000 women were working on the land by 1918, as the WLA continued to help stave off the possibility of famine.

FACTORY WORKERS WERE KNOWN AS 'MUNITIONETTES'

4

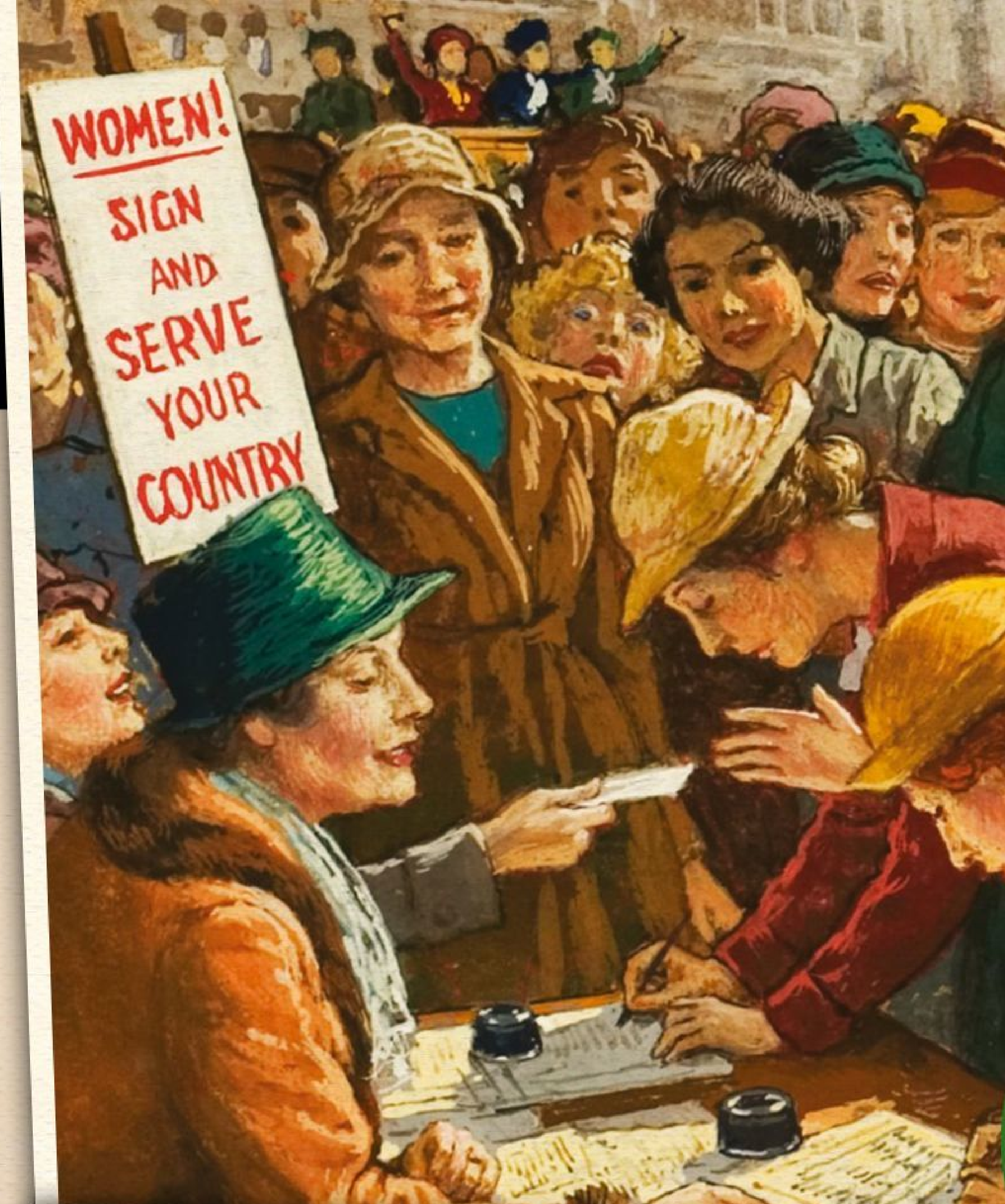
The Munitions of War Act was passed in 1915 to give David Lloyd George, then minister of munitions, complete power over the industry. For supply to meet demand, unskilled female workers were brought into the fold. The huge influx of women led to these 'munitionettes' joining trade unions in their thousands. The most famous was led by trade unionist and women's rights campaigner Mary MacArthur, and helped raise safety concerns as well as increase women's pay. Mothers, wives, sisters, daughters and even grandmothers filled the void in the industry left by the men. The days were long and the work was repetitive as women engaged in physically demanding labour. The days were made easier through social activities but there were some trade unions that were against women working, as they believed it would lessen male wages after the war. Despite protests, it was obvious – the British workplace was changing for the better.

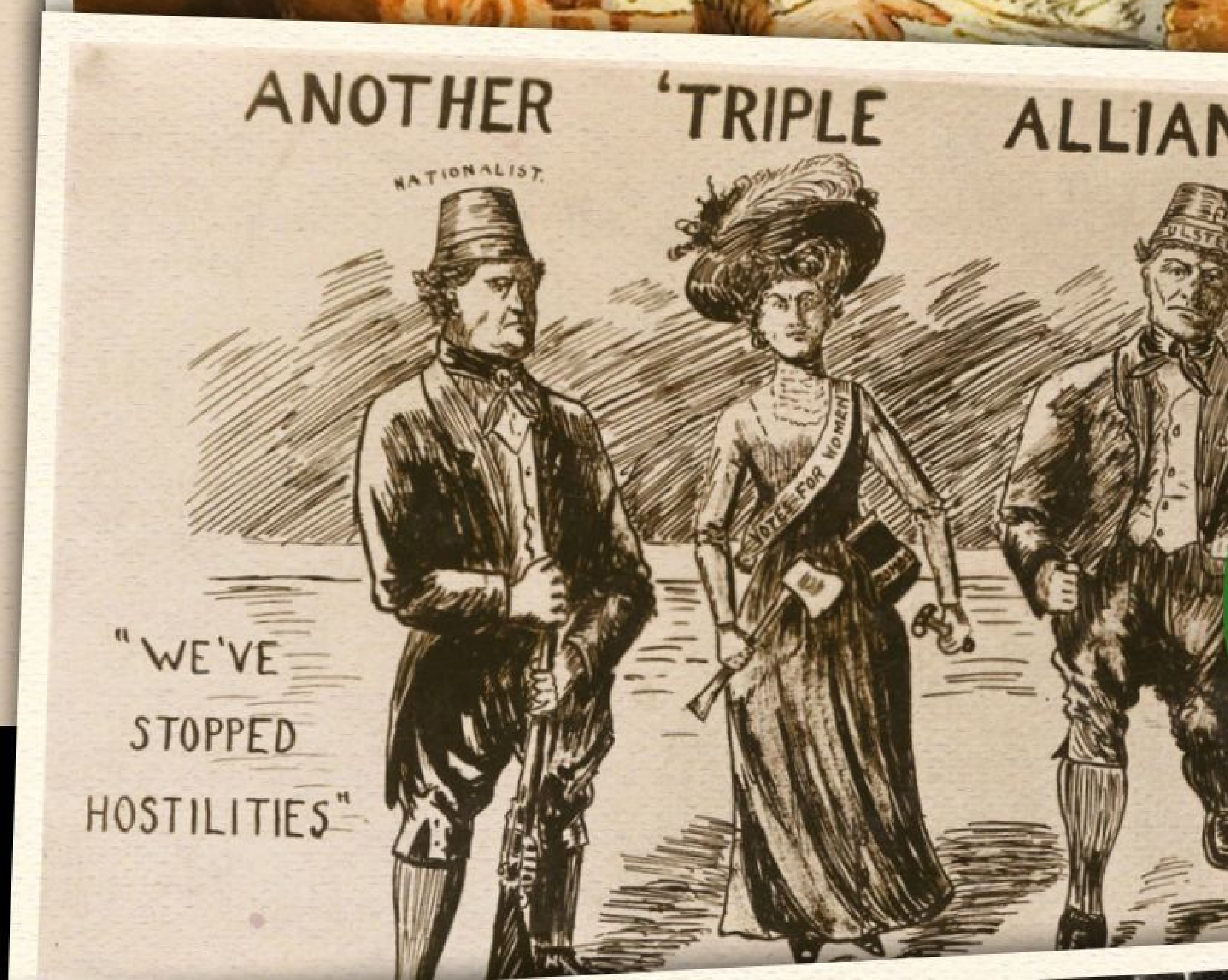
By 1918, the average female wage in the munitions industry was £2 and two shillings. This was less than half the £4 and six shillings men were paid

200,000 WOMEN TOOK UP JOBS IN GOVERNMENT

5

Britain's new female workforce excelled themselves in the factories and out in the fields, but they also took jobs in government. Due to the lack of men, women were given the opportunity to work in jobs they would have previously been excluded from. High-up positions took women away from the monotonous work they were used to and helped them prove to politicians that they were worthy of the vote and equal rights. Things began slowly as the Liberal government only created a register for women to work in March 1915. 80,000 signed up immediately but there just wasn't enough work available. As a result, many took it upon themselves to find work, getting jobs as ambulance drivers, bus conductors and bank clerks. The female work force had started to mobilise.


WOMEN!
SIGN AND SERVE YOUR COUNTRY



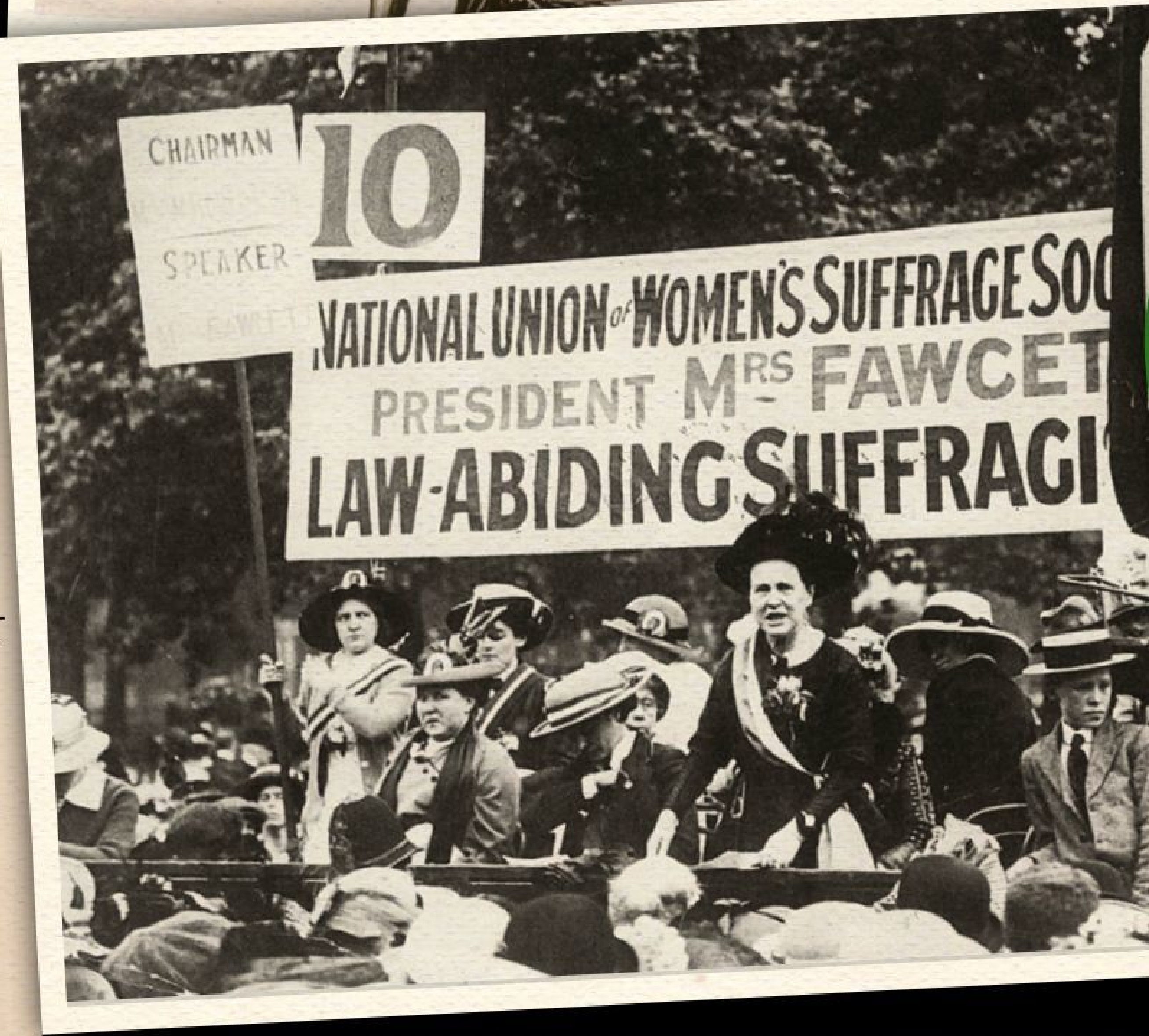
TOP: In addition to the women working in governmental departments, 500,000 took up clerical positions in offices

MIDDLE: A 1914 postcard showing how the government wanted suffragettes, Irish Nationalists and Unionists to put their political ideologies aside

THE SUFFRAGETTES CHANGED TACK…

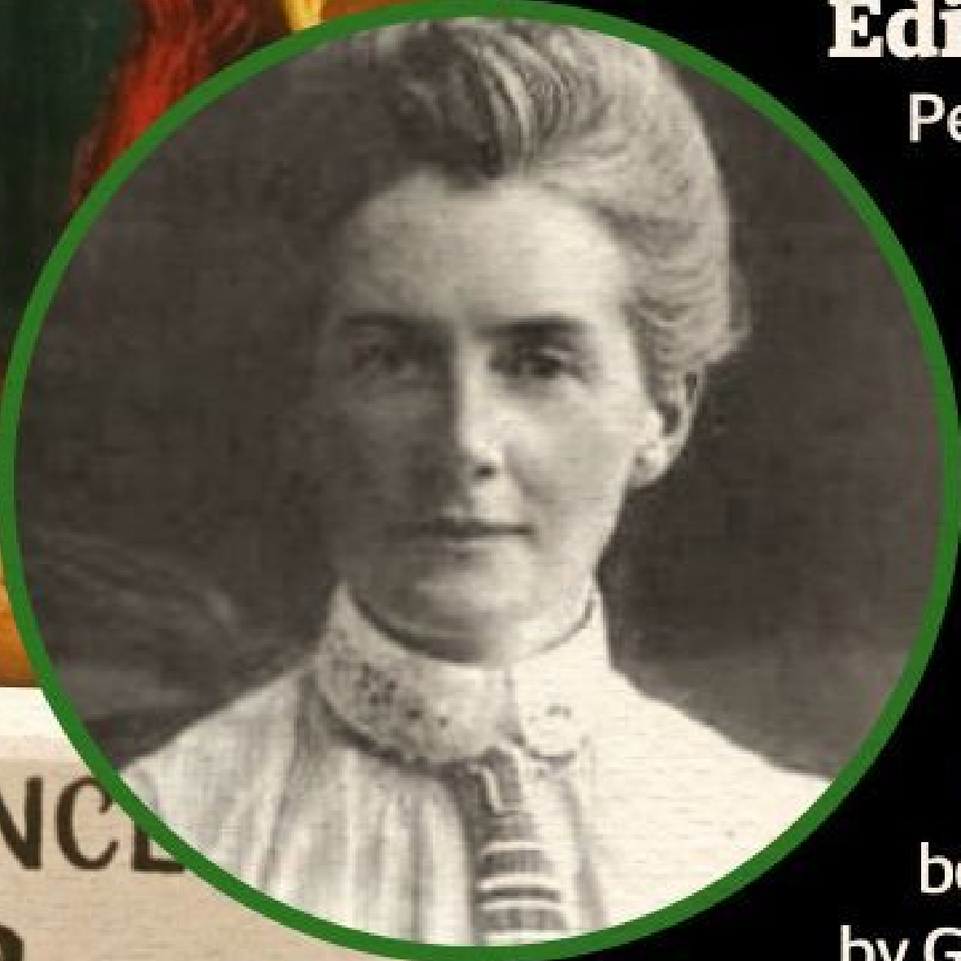
6

Emmeline Pankhurst and the suffragettes saw the war as an opportunity. By scaling down their own campaigning and focusing on helping the government, they would prove just how capable women could be. Active campaigning was used once in the 'Right to Serve' protest, but the remainder of the Women's Social and Political Union's (WSPU) energy was geared towards a patriotic stand against the threat of the Central Powers. The new direction caused a split in the WSPU. Emmeline and her daughter Christabel were staunch advocates of ending militant activity and supporting the war, but Christabel's sisters, Sylvia and Adela, weren't on the same page. Both pacifists, they made efforts to maintain peace, with Sylvia helping form the Women's Peace Army and Adela setting up the Australian branch of the organisation. The 1918 Representation of the People Act proved both strategies had been in some way successful.



On the front line

Just three of the army of British women who travelled with the men to fight for Britain



Edith Cavell

Perhaps the most famous nurse of the entire war, Edith Cavell is said to have helped more than 200 Allied soldiers escape from German-occupied Belgium into the neutral Netherlands. Cavell cared for soldiers on both sides, but was captured by German officials and shot by a firing squad in October 1915.

Flora Sandes

Just being a nurse wasn't enough for the headstrong Flora Sandes, who enlisted as a Serbian Army soldier. Leaving as soon as Austria-Hungary declared war, Sandes volunteered to work in an ambulance unit. Even when Serbia was invaded, she followed the new government-in-exile to Corfu as part of the Iron Regiment.

Evelina Haverfield

The former suffragette was described by Sylvia Pankhurst as "cold and proud". A determined and active WSPU member, upon the outbreak of the war Haverfield put all her energy into helping in the conflict. She founded the Women's Emergency Corps, which became influential in helping women become doctors, nurses and motorcycle messengers.

LEFT: The war changed the outlook of the suffragist movement, and for once, Pankhurst and Fawcett were almost treading the same path

…AND SO DID THE SUFFRAGISTS

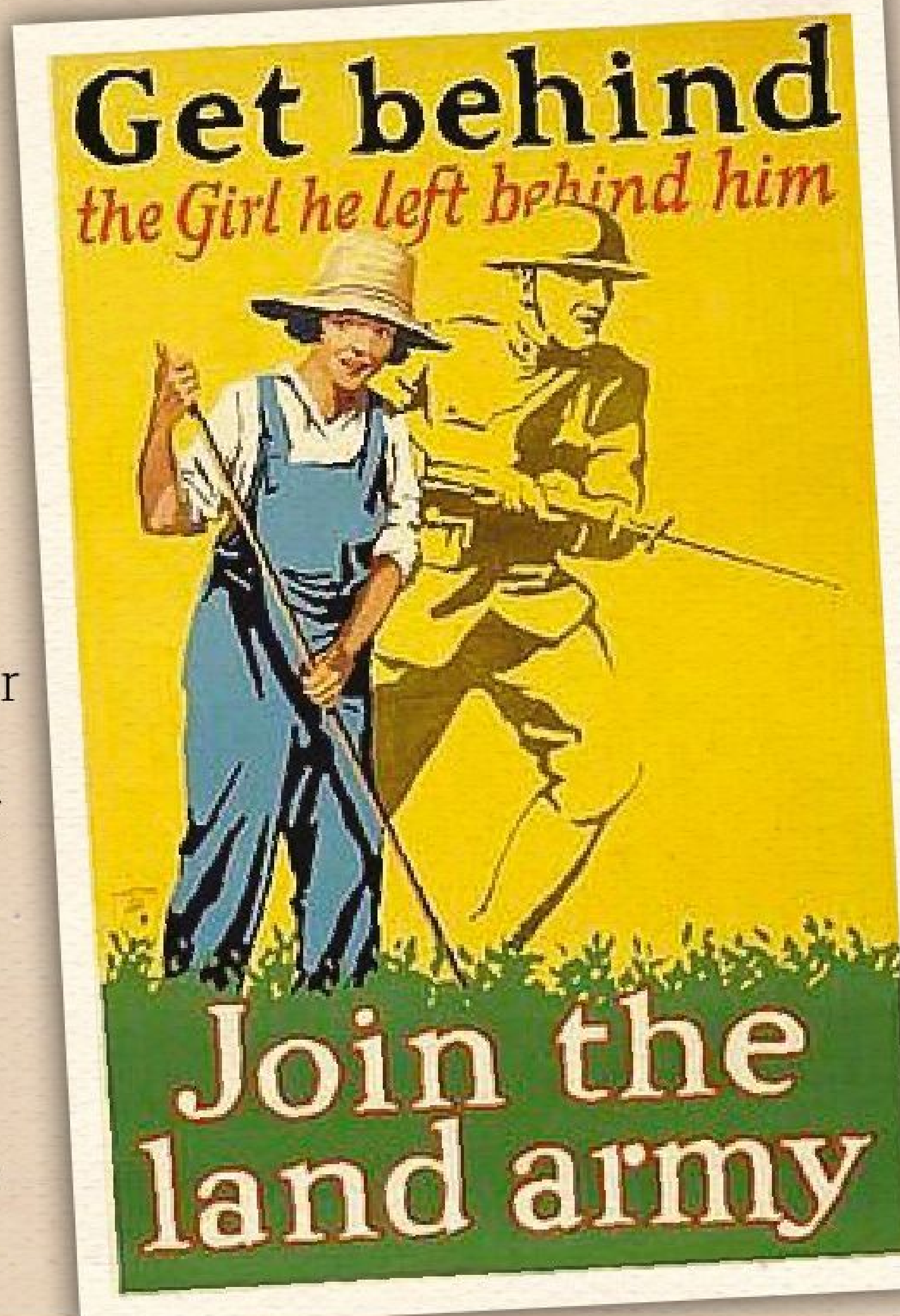
7

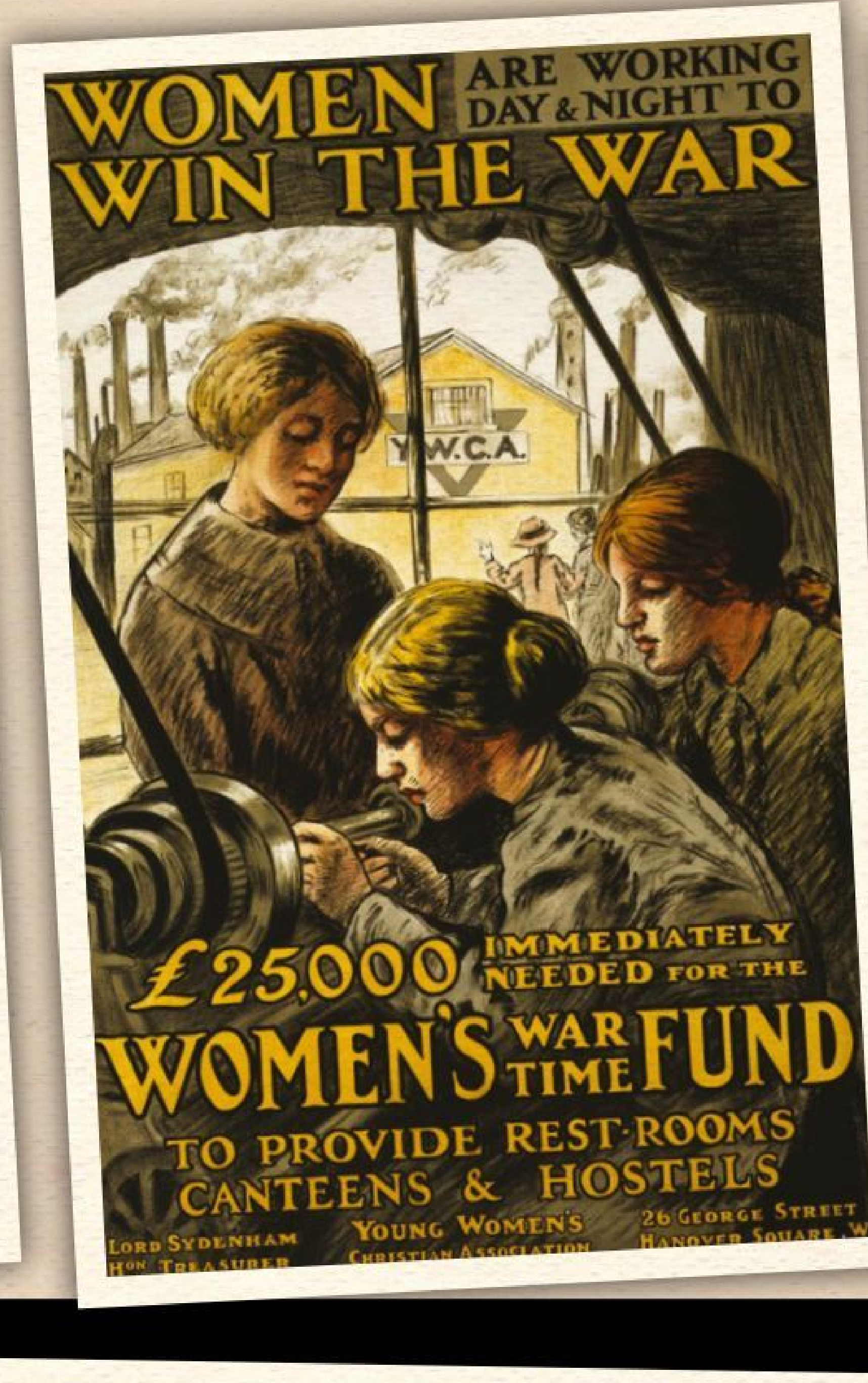
Like the suffragettes, the National Union of Women's Suffrage Societies (NUWSS) endured a split in its organisation. In February 1915, the NUWSS leader Millicent Fawcett realised that talks of peace were futile and decided not to support the Women's Peace Congress. This divided the organisation, with many women sticking to their pacifist guns. As the war raged on, Fawcett, taking a leaf out of the suffragettes' book, ensured the NUWSS helped fund and set up women's hospital units in France, as well as helping form the Women's Emergency Corps and the Women's Volunteer Reserve. One action the group didn't take part in, though, was the White Feather Campaign, which actively persuaded men to join the armed forces. The NUWSS also carried on campaigning peacefully. It is without doubt that the hard work of the suffragettes and suffragists during the war was integral in the gaining of the vote for women.

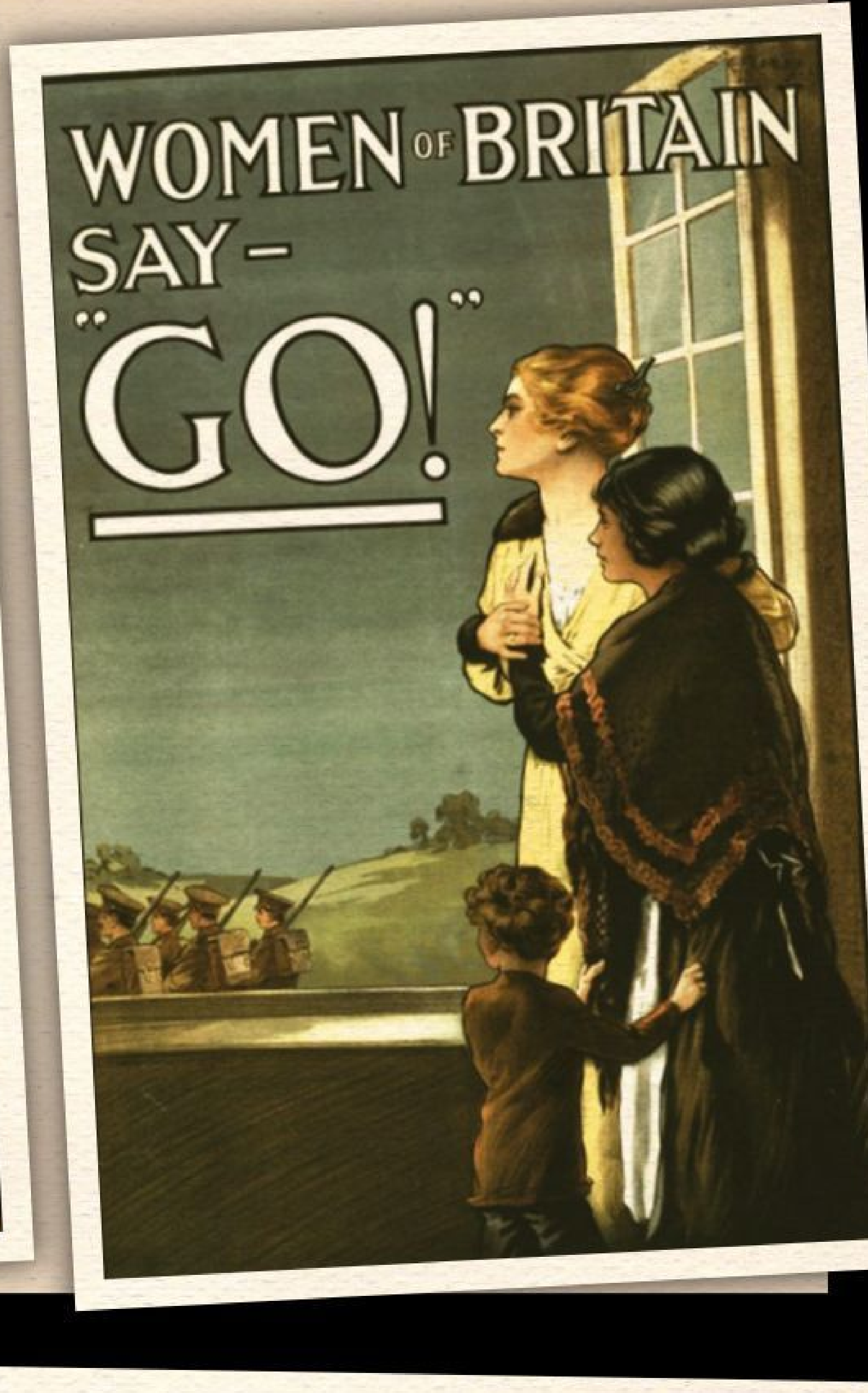
PROPAGANDA TARGETED AND EXPLOITED WOMEN

8

Pro-war and anti-German posters were abundant in World War I, but propagandists also saw the benefit of including women in their work. Some appealed directly to women to encourage them to contribute to the war effort, but others used women as a tool to encourage more men to sign up to fight.


Get behind
the Girl he left behind him
Join the land army


WOMEN ARE WORKING DAY & NIGHT TO WIN THE WAR
Y.W.C.A.
£25,000 IMMEDIATELY NEEDED FOR THE
WOMEN'S WAR TIME FUND
TO PROVIDE REST-ROOMS CANTEENS & HOSTELS
LORD SYDENHAM Hon. TREASURER
YOUNG WOMENS CHRISTIAN ASSOCIATION
26 GEORGE STREET HANOVER SQUARE W


WOMEN OF BRITAIN SAY – "GO!"

BRITISH WOMEN SERVED ON THE WESTERN FRONT AS NURSES AND SOLDIERS

9

The input of the Voluntary Aid Detachment (VAD) and the Women's Hospital Corps (WHC) has been underrated. Members of these groups served as drivers and nurses, tending to the legions of men who were lying injured in field hospitals. These hospitals were founded and run by women in both France and Belgium, and the soldiers who went home were sent to the Endell Street Military Hospital, which treated a total of 26,000 patients and performed more than 7,000 major operations.

One woman actually enlisted in the army under the alias Denis Smith. Dorothy Lawrence only remained ten days in the ranks of a tunnelling company before she gave herself in after concerns for the company's safety. After interrogation, she was condescendingly thought to have been a 'camp follower', or prostitute. As well as on the Western Front, many British women joined the fight as far afield as Serbia and Russia.

Dorothy Lawrence convinced everyone that she was a male Tommy reporting for duty

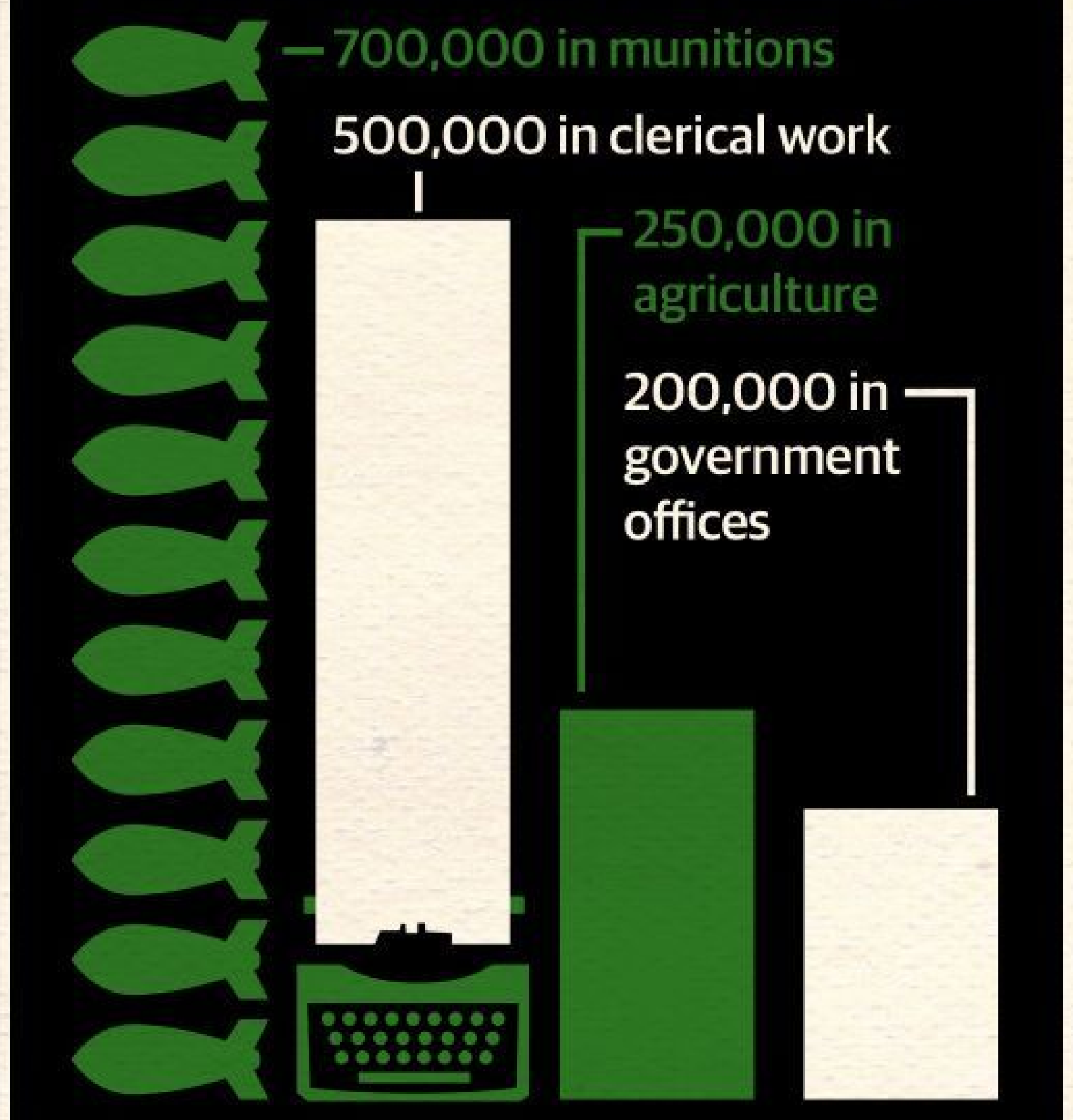
The role of women in the armed forces only grew as time wore on but sadly many of the service records were destroyed by German bombing in 1940

A FEMALE AUXILIARY CORPS WAS SET UP

10

Not everyone was like Dorothy Lawrence and joined up with the male rank and file. The Women's Army Auxiliary Corps (WAAC) only began in 1917 but quickly proved itself to be an effective wartime organisation. Recommended by Lieutenant-General H Lawson, far more women applied than anticipated and would be rewarded with a minimum pay of 24 shillings a week. It was structured into four units: Cookery, Mechanical, Clerical and Miscellaneous. The influx took the pressure off men performing 'soft jobs' in the army and allowed them to fight on the front while women worked behind the lines. A total of 57,000 women served in the corps but, despite its success, there was still resistance to the WAAC. British newspapers falsely claimed that large numbers of women were pregnant through relationships with soldiers, even though an official investigation found this to be grossly exaggerated. The WAAC was disbanded in 1921 but restarted again as the Auxiliary Territorial Service in World War II.

In Numbers



Where women worked in World War I

100,000

women joined the armed forces during the course of the war

5 million

women were in employment in 1918

54,000

spectators attended the 1920 munitionettes cup final at Goodison Park, the home of Everton FC

12 million

letters were sent by British women to the front line

FEMALE VOLUNTEERS TAUGHT MEN HOW TO USE FIREARMS

11

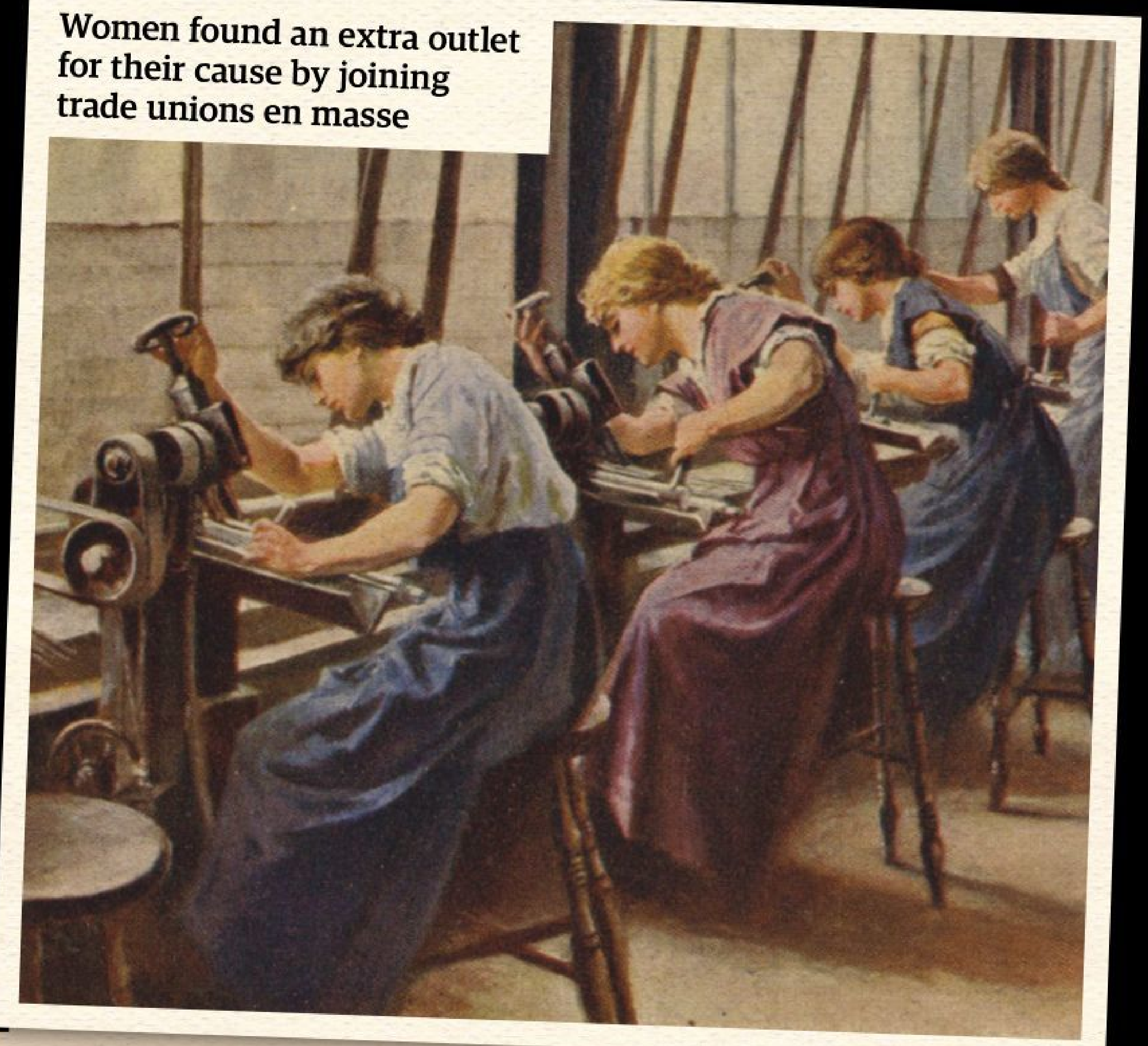
The Women's Defence Relief Corps consisted of two divisions, the civil section and the lesser-known semi-military section. The latter division gave women the chance to undergo drills, marching and signalling as well as instruction in the use of firearms. This training in military values did much for the White Feather Campaign and helped convince men to join up for the fight. The Local Defence Volunteers (LDV) were the predecessors of the Home Guard in World War II. The organisation employed women to help men train to fire weapons. Additionally, the Bolton War Hospital Supply Depot represented another way women could contribute to the war from back home. More than 20,000 packages were sent to men on the front from this one depot alone as women did their best to make life easier for their husbands away at war.

It is believed that 38,000 women worked as nurses, ambulance drivers and cooks on both the Home and Western fronts

THE FIRST POLICEWOMEN WENT ON THE BEAT

13

Originally known as Women's Patrols, the first female police officers helped maintain discipline and monitor workplace behaviour while war raged in Europe. They were mainly found in factories, but the force also worked in public areas such as railway stations, parks, cinemas and pubs. Despite being part of the police, these officers didn't have the power to arrest and could only present evidence in court on behalf of a male officer. Margaret Dahmer Dawson and Mary Sophia Allen were instrumental in the formation of the Women's Police Volunteers. Taking the mantle from the National Union of Working Women, who had set up 5,000 voluntary patrols, the group soon morphed into the Women's Police Service and were put on duty in all major cities, adopting short haircuts and an army-like hierarchy.



Women found an extra outlet for their cause by joining trade unions en masse

BRITAIN'S FIRST FEMALE-LED STRIKE TOOK PLACE

12

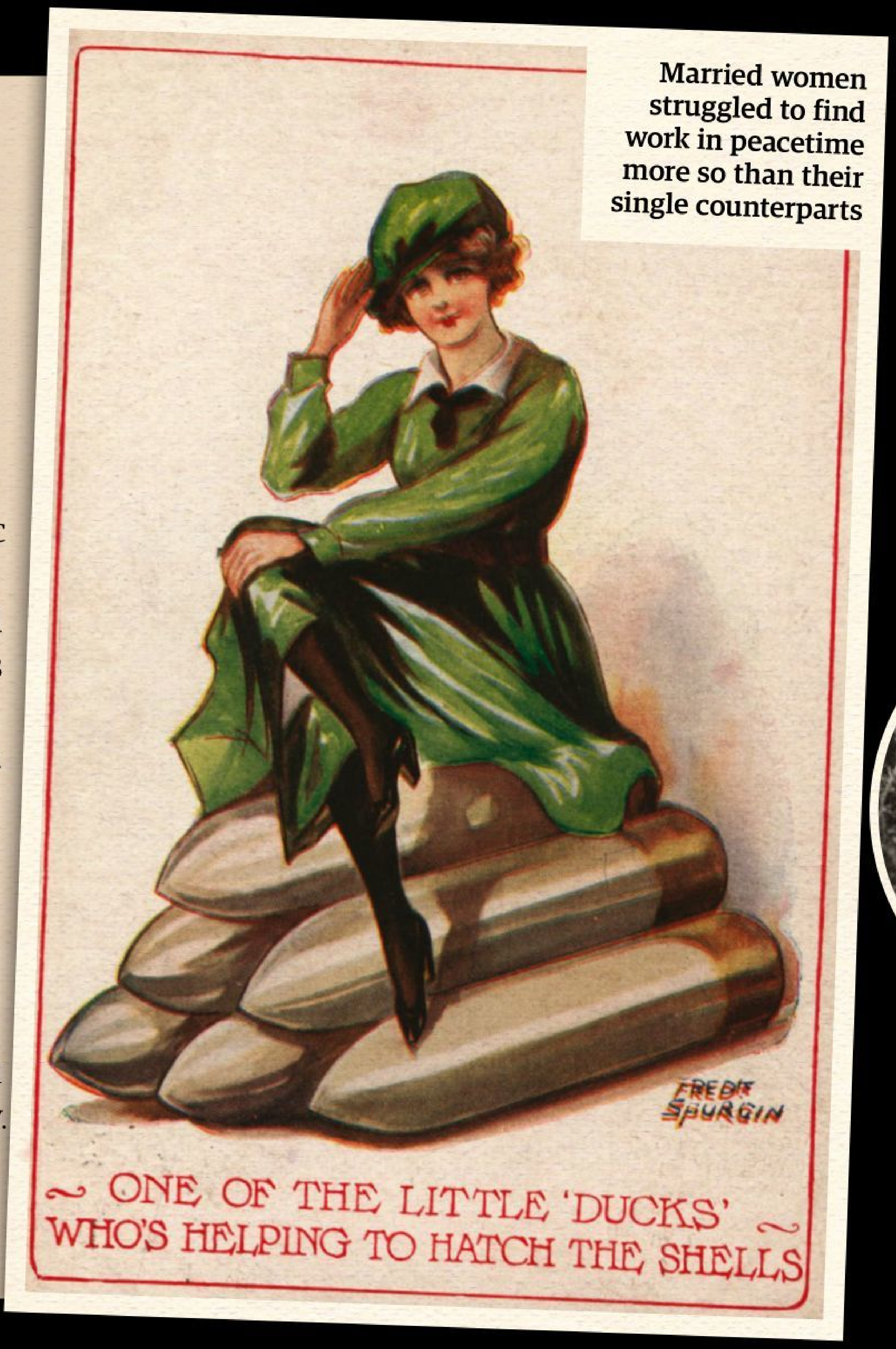
Women's trade union membership increased dramatically during the war; there was a 160 per cent rise in female members. The unions that benefited most were the National Federation of Women Workers and the Worker's Union (WU). By 1918, the WU had 20 full-time female officials and a female membership of more than 80,000 – a quarter of the union's entire membership. A few months before the end of the war, female workers on London buses and trams led a strike, demanding equal pay – the first in the UK to be initiated and won by women. The strike spread to the Underground and other towns across the country. This showed the power women could wield when part of an organisation, and was a total departure from the pre-war years, when 90 per cent of women weren't part of a union.

Officers being inspected by Mary Sophia Allen, one of the key figures in the Women's Police Volunteers

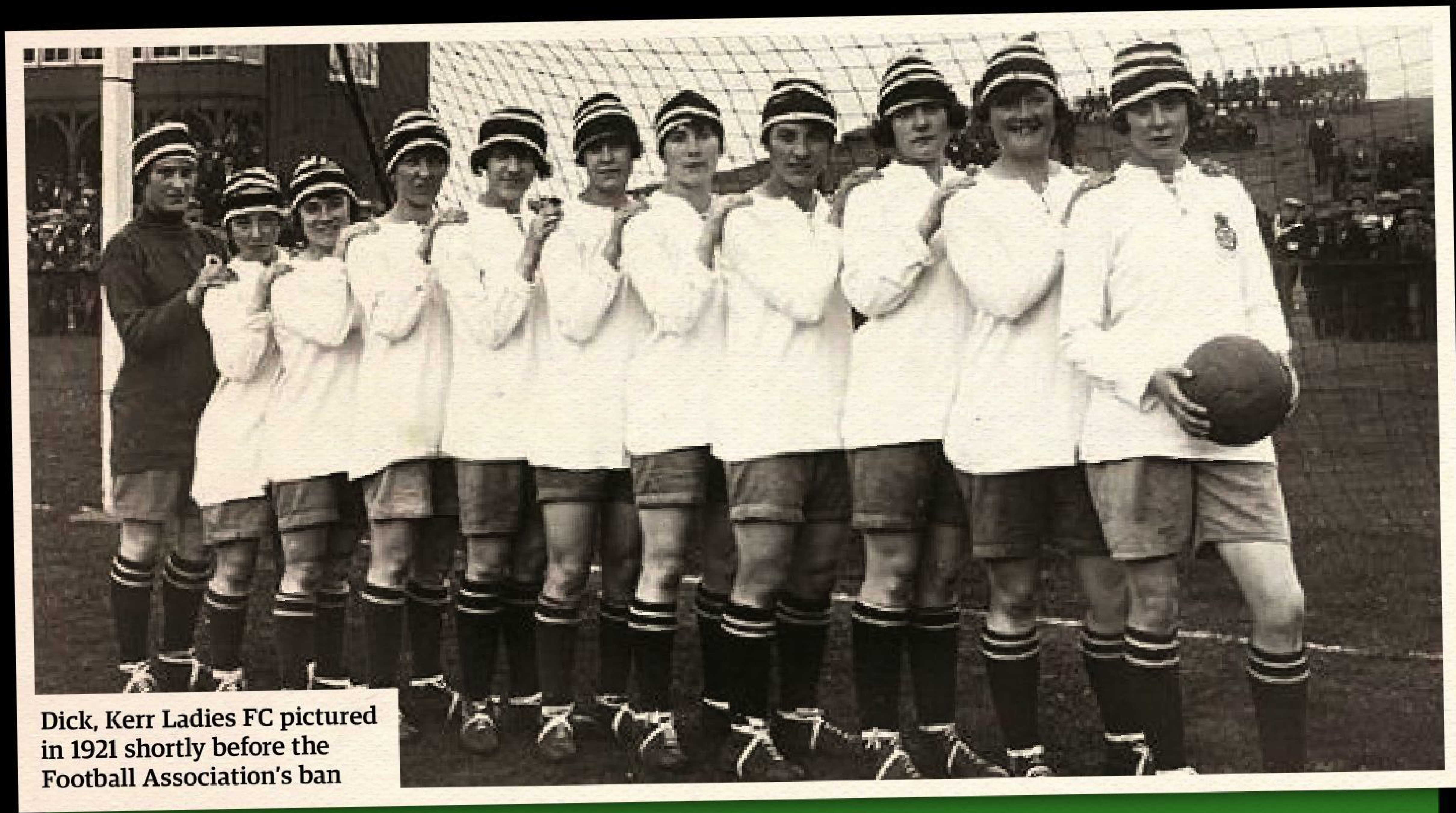
SINGLE WOMEN FOUND THEMSELVES AT AN ADVANTAGE AFTER THE WAR

14

The loss of 750,000 British men in the war had a drastic effect on the lives of British women. Newspapers printed stories of a so-called 'surplus of women' that would never find husbands after the high wartime casualties. However, remaining single did have its benefits. After the war, single women had much better job prospects than married ones. A wife who saw her husband return home would most likely have to nurse him back to health, which could hamper her chances of finding work. Some professions, such as teaching, only allowed single women to apply. The Sex Disqualification (Removal) Act of 1919 helped end this, but only one in ten married women were in work by the 1930s.


~ ONE OF THE LITTLE 'DUCKS' ~
WHO'S HELPING TO HATCH THE SHELLS
FREDK SPURGIN

Married women struggled to find work in peacetime more so than their single counterparts



Dick, Kerr Ladies FC pictured in 1921 shortly before the Football Association's ban

WOMEN'S FOOTBALL KICKED OFF

15

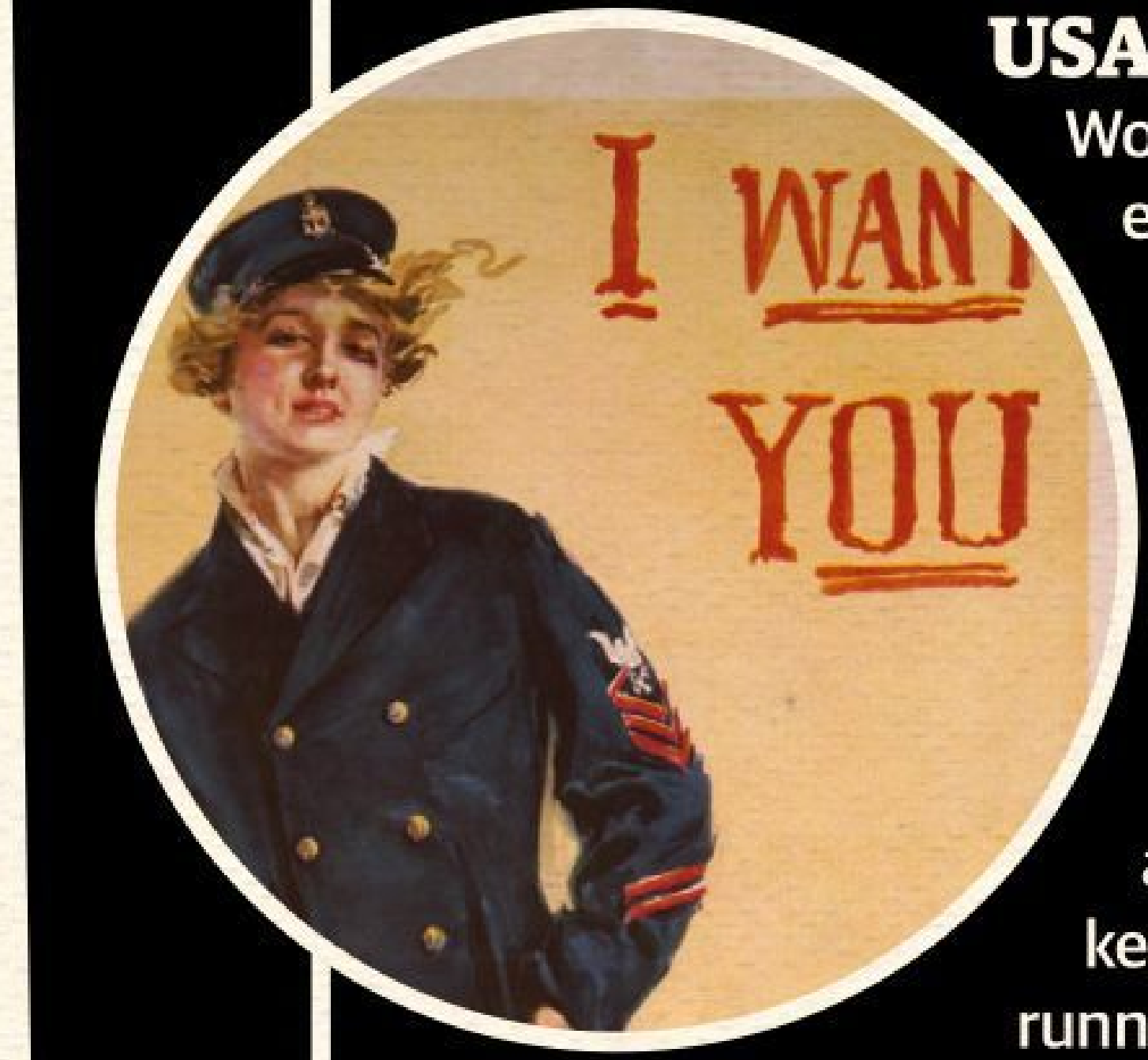
As women started to work together in large numbers, social and sporting events began to spring up. Of all the social gatherings, football was the pastime that really became popular. Factory bosses actively encouraged sport, as it improved the workers' health and wellbeing. The friendly activity soon turned into competition, and several teams were formed. One of the most famous teams was Dick, Kerr's Ladies FC, who played in Preston. Formed in 1917, the club drew a crowd of 10,000 people for their first match. Later that year, the Munitionettes cup was won by Blyth Spartans, with striker Bella Reay scoring a hat-trick. The women's game reached a peak when 54,000 spectators crammed into Goodison Park on Boxing Day 1920. Sadly, women's football was banned in 1921, as it was expected that women would return to the household. Despite its wartime popularity, women's football would not officially return until the ban was lifted 50 years later, in 1971.

A global revolution

It wasn't just British women who did their country proud in the Great War

Germany

Just like Britain, Germany found itself in need of a labour force as men were put forward onto the Western and Eastern fronts. Food blockades by the Allied forces just made things worse for the families left at home without a husband or a father. Youth and female employment increased drastically to provide the men with munitions. After the war, children and teenagers benefited more than women as they began to rely less on their parents and could find work more easily in the interwar period. Society stood still for women, however, who were still treated as inferior to men in the workplace.



USA

World War I saw the employment of 3 million women in the food, textile and war industries in the USA. With the men abroad, American women took jobs as streetcar conductors and radio operators, and kept the factories up and running. Firms that usually specialised in car production or clothing were converted into tank and uniform factories respectively. Additionally, 11,000 women served abroad as nurses. World War I was the first war to officially allow women to serve. The navy in particular was struggling to cope with demand, and the Naval act of 1916 allowed women to sign up and serve as 'Yeomen'.

Russia

Going further than any other country, Russia mobilised women within the army. By 1917, segregated units were created by the tsar in an effort to win the war and turn the social and political tide. These female soldiers became media celebrities in their home country. The infamous Women's Death Battalion was created by Maria Bochkareva and went on to fight in the trenches of the Austro-Hungarian front after the men had abandoned it. The battalion even went as far as defending the Winter Palace in Petrograd from Bolshevik forces. Because of this, they are sparsely mentioned in the history of the USSR.

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The Red Baron

Hunter, cold-eyed killer and World War I superstar - one man owned the airspace above the Western Front

"Brought up to see killing as a competitive sport, he spent every spare hour stalking wild animals across the mountains and forests of his family's sizeable Silesian estate"

21 April 1918 was a Sunday. At about 11am, Lieutenant Wilfrid May of the newly formed RAF found himself high above the shattered battlefields of the Somme. He was a long way from home. The 22-year-old from rural Canada would ordinarily be emerging from a stuffy church service at this time of the week, but here he was searching the blue skies of northern France for men to kill.

It was only May's second combat patrol. His first, the day before, had left his commanding officer (CO) Captain Roy Brown, who'd known May since high school, convinced that the inexperienced pilot wouldn't last long. If the patrol got into a fight that morning, Brown strictly told May, he was to keep out of it. At the age of 25, Brown was a veteran well versed in the dangers of aerial combat. He also knew May's mother quite well, and had no desire to send her a letter of condolence.

Soon after entering German airspace, the RAF patrol was attacked by the brilliantly painted planes of The Red Baron's Flying Circus. Initially, May obeyed orders, obediently circling high above the battle, until he glimpsed a solitary German triplane below, also apparently avoiding the fray. It was an easy target and the opportunity for glory too great to resist. As he pushed his joystick forward and dived towards destiny, May didn't know that he was about to attack Wolfram von Richthofen, the cousin of the deadliest airman of his age - Manfred von Richthofen - who would soon be on his tail.

Manfred von Richthofen was bred for war. Born into an aristocratic military family in Kleiburg, eastern Germany, on 2 May 1892, he was taught to hunt from an early age. Before he was out of his teens he'd become a gifted marksman and skilled hunter. Brought up to see killing as a competitive sport, Manfred spent every spare hour stalking wild animals across the mountains and forests of his family's sizeable Silesian estate. Hunting would remain a life-long obsession.

Aged 11, Richthofen's father sent him away to Wahlstatt Cadet College. Here, his formal military training began, carving a narrow educational route into adulthood. Through endless drill, classroom instruction and corporal punishment, the self-sacrifice required of a warrior-servant to the Kaiser was hammered into him.

Eight years later, when Richthofen emerged from the Royal Military Academy at Lichterfelde, he'd evolved from a boy hunter into a heel-clicking cavalry officer steeped in German militarism. His martial skill, self-discipline, extreme sense of duty and total self-belief added up make to an individual perfectly programmed for war.

However, when war broke out in 1914, the 22-year-old discovered that his role was all but redundant. The advent of the machine gun had rendered mounted troops obsolete, and so the young soldier - aching for glory - began looking for other ways into the war. He soon found one via

© Chris Collingwood - Collingwood Historic Art

the intriguing new flying machines buzzing about above the freshly dug trenches.

In 1914, planes were only a decade old. Military commanders on both sides had serious doubts they could be put to any practical use, but as trench warfare mired the conflict into a stalemate, it was clear they could be used to spy on enemy lines from above. Traditionally, reconnaissance had been a cavalry role, and in May 1915, Richthofen got himself reassigned as observer with the German Flying Service on the Eastern front.

By now, aerial warfare was changing rapidly. In a few months it had gone from men in rickety contraptions attacking each other with bricks and pistols to purpose-built flying gun platforms. The Germans had led the way, and by July 1915 were ruling the skies with their Fokker Eindecker monoplanes. Effectively the world's first fighter aircraft, it came replete with a synchronised firing mechanism that enabled the pilot to shoot through his propeller without shooting it off. Competing with each other to "score the most kills," German pilots who managed a tally of five or more also acquired a flashy new sobriquet – überkanonen, or top gun.

These aces, as they were known on the Allied side of the line, were Imperial Germany's posterboys. Their stories appeared in newspapers and their faces on cigarette cards all over the country. Girls wanted to marry them, boys wanted to be them. None was more famous than Oswald Boelcke, and it was Boelcke who, during a chance meeting with a besotted Richthofen on a train in 1915, convinced him that his future lay in flying.

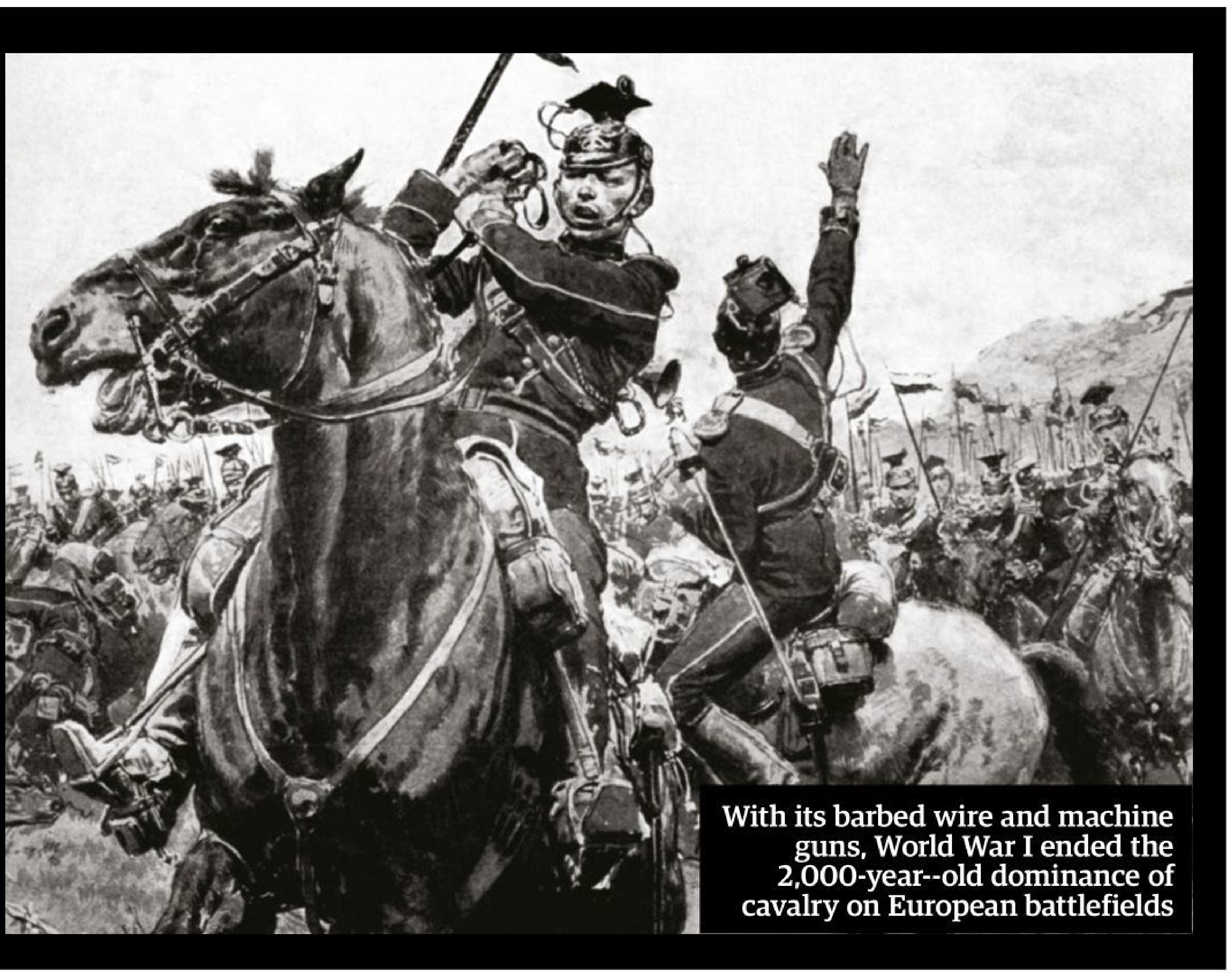
Richthofen requested permission to retrain as a pilot. Not a naturally gifted pilot, he struggled through flight school. Despite crashing on his first solo flight, by Christmas 1915 he'd won his wings. Rather than being assigned to a fighter squadron, however, Richthofen found himself flying bombers (another recent development) until Boelcke once again stepped in.

The Red Baron's squadron Jagdstaffel 11, Manfred sits in his Albatross bi-plane, while his brother Lothar sits on the ground

Cavalry recon of World War I

Richthofen's war started not in the air but on horseback

After completing military training, Richthofen was commissioned into the 1st Regiment of Uhlans – lancers who specialised in reconnaissance. It was a good fit for the dashing young baron. For hundreds of years the cavalry had enjoyed high status in European armies, and he was almost as keen a horseman as he was a hunter. When World War I broke out, Richthofen was garrisoned in Ostrowo, eastern Germany, and a few days into the conflict led a reconnaissance patrol into enemy territory. He spent several days behind Russian lines and, after narrowly avoiding a confrontation with mounted Cossacks, withdrew. On his return, he discovered that his garrison commander had been wrongly informed of his fate. Richthofen was forced to send a telegram home reassuring his parents that he wasn't dead.
The next day, he was dispatched to the Western Front. Here, on 21 August, his troop charged a French position near Virton in Belgium, only to be cut down by machine guns. The incident proved what Richthofen had suspected for some time – that cavalry was redundant on the modern battlefield. Soon after he found himself undertaking supply duties far from the Front. It was a role he endured for several months until he wrote a letter to his commanding officer requesting reassignment to the Flying Service. "My dear excellency!" his letter opened, "I have not gone to war to collect cheese and eggs…" He was transferred almost immediately.


With its barbed wire and machine guns, World War I ended the 2,000-year--old dominance of cavalry on European battlefields

Rise of the Jastas and the Flying Circus

With the advancement of the plane as a weapon came the need for new and innovative tactics

At the outbreak of World War I, Germany's air force was all but nonexistent. Over time, however, events on the ground and technological advances in the air helped shape both its structure and role.

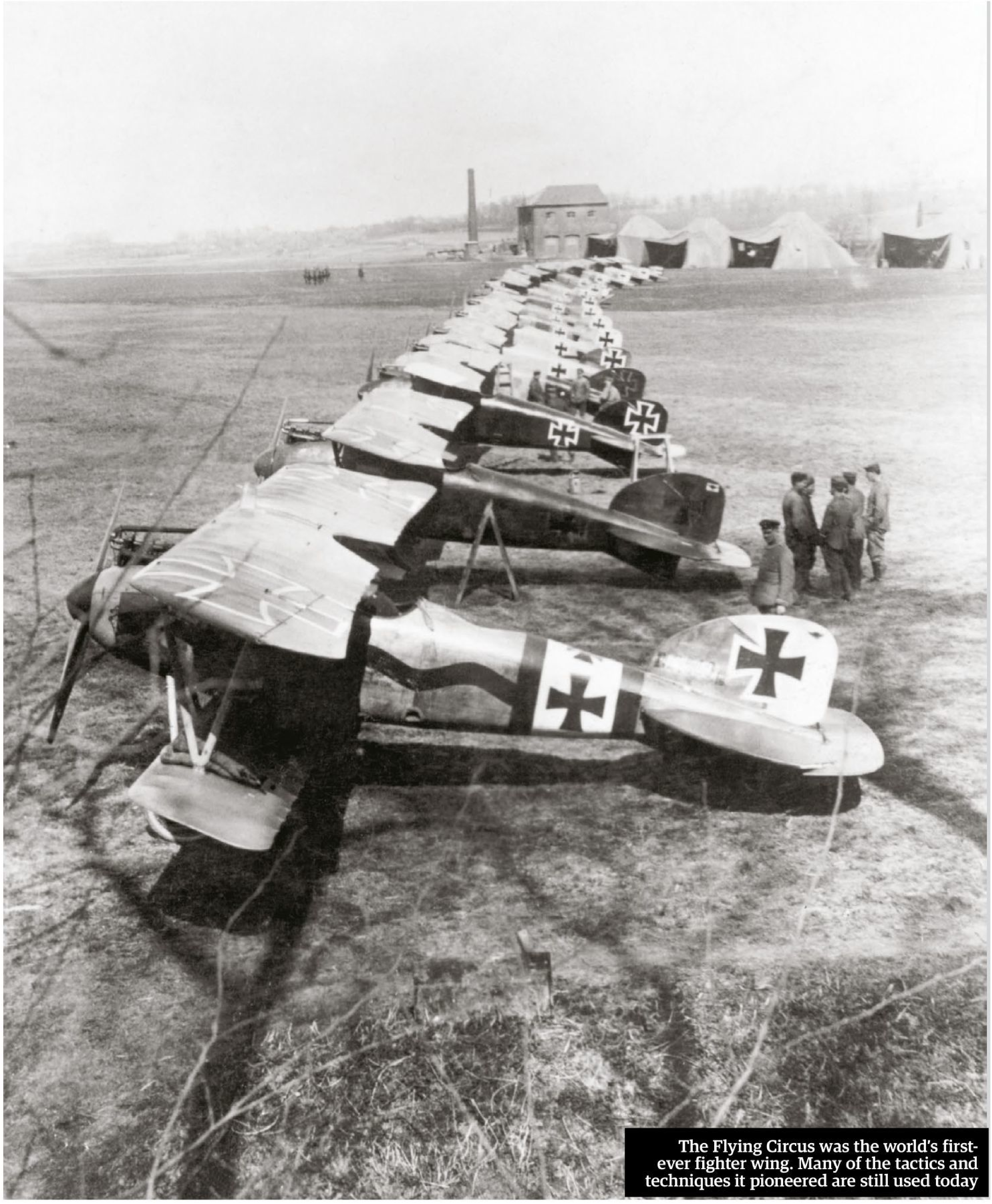
With a war on two fronts, Germany fought defensively, particularly in the west, for most of the conflict. When it came to air supremacy, therefore, the emphasis focused on developing fighter planes whose job it was to stay behind their own lines, protecting German airspace from incursion by enemy bombers and reconnaissance aircraft. This gave the nascent German Flying Service an edge for great chunks of the war in two ways. First, their aircraft flew fewer miles so could stay airborne for longer. Second, their job – like the RAF's in 1940 – was to defend the air and not attack the ground, so their aircraft tended to be lighter and faster.

With a clear role defined by 1915, different German aircraft began to appear that could carry out this task – initially in the shape of the Fokker Eindecker, then the various iterations of the Albatross biplane, and finally the flawed Fokker Dr1. Theories about how these new flying weapons might best be used also evolved.

> "It established itself as the most-feared air unit of World War I"

By the summer of 1916, Germany's leading ace Oswald Boelcke organised a prototype squadron of aerial hunters. Jagdstaffel 2 – or Jasta 2 – which started life as a mongrel group of flyers in a mixed bag of planes. Under Boelcke's guidance, however, and once equipped with Albatrosses, Jasta 2 became a prototype for success. Typically manned by 12-16 pilots, a Jasta – or squadron – would hunt in formation, and by April 1917, with 37 fully operational Jastas on the Western Front, the Germans had established total, albeit temporary, control of their own airspace.

This initial success bore Jagdgeschwader 1 – a four-squadron formation created in the summer of 1917. Nicknamed the Flying Circus, it established itself as the most-feared air unit of World War I and set a precedent for future terror. Richthofen was its first Great War leader, while Hermann Goering – who'd go onto lead the Nazi Luftwaffe in the next war – was its last.



The Flying Circus was the world's first-ever fighter wing. Many of the tactics and techniques it pioneered are still used today

Early aces

Richthofen wasn't Germany's first top gun, or its last

Max Immelmann

The first German ace of the war was South African-born Immelmann, who won the Pour Le Merite – at the time Germany's highest decoration. He claimed 17 victories before being killed in June 1916. He's best remembered for inventing the Immelmann Turn – a loop-and-roll dogfight manoeuvre still used today.

Oswald Boelcke

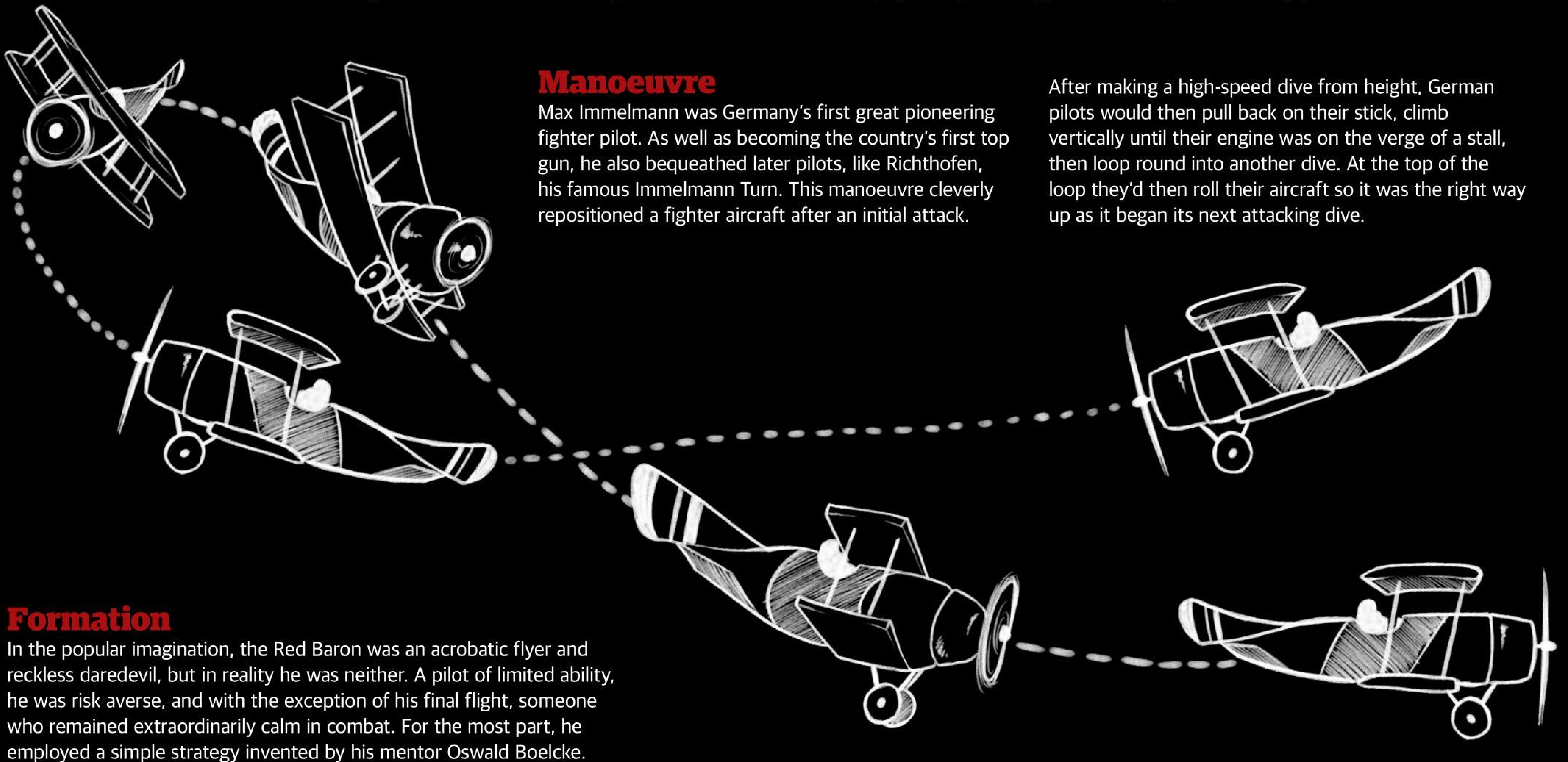
Pour Le Merite-winner Boelcke claimed 40 kills before losing his life in a mid-air collision in October 1916. He left behind a legacy of tactics and techniques that are still taught to modern fighter pilots. Boelcke's death had a particularly profound affect on Richthofen, who idolised him.

Hermann Goering

Hitler's future right-hand man was appointed the Flying Circus's CO after Richthofen's death. He ended the war with 22 kills and a Pour Le Merite. During his time with the outfit, he befriended Richthofen's cousin, Wolfram. The pair would go on to work closely together after the war.

The tactics of fight & flight

Richthofen was a great hunter in the sky, but he utilised two key principles to gain the edge on his opponents



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Manoeuvre

Max Immelmann was Germany's first great pioneering fighter pilot. As well as becoming the country's first top gun, he also bequeathed later pilots, like Richthofen, his famous Immelmann Turn. This manoeuvre cleverly repositioned a fighter aircraft after an initial attack.

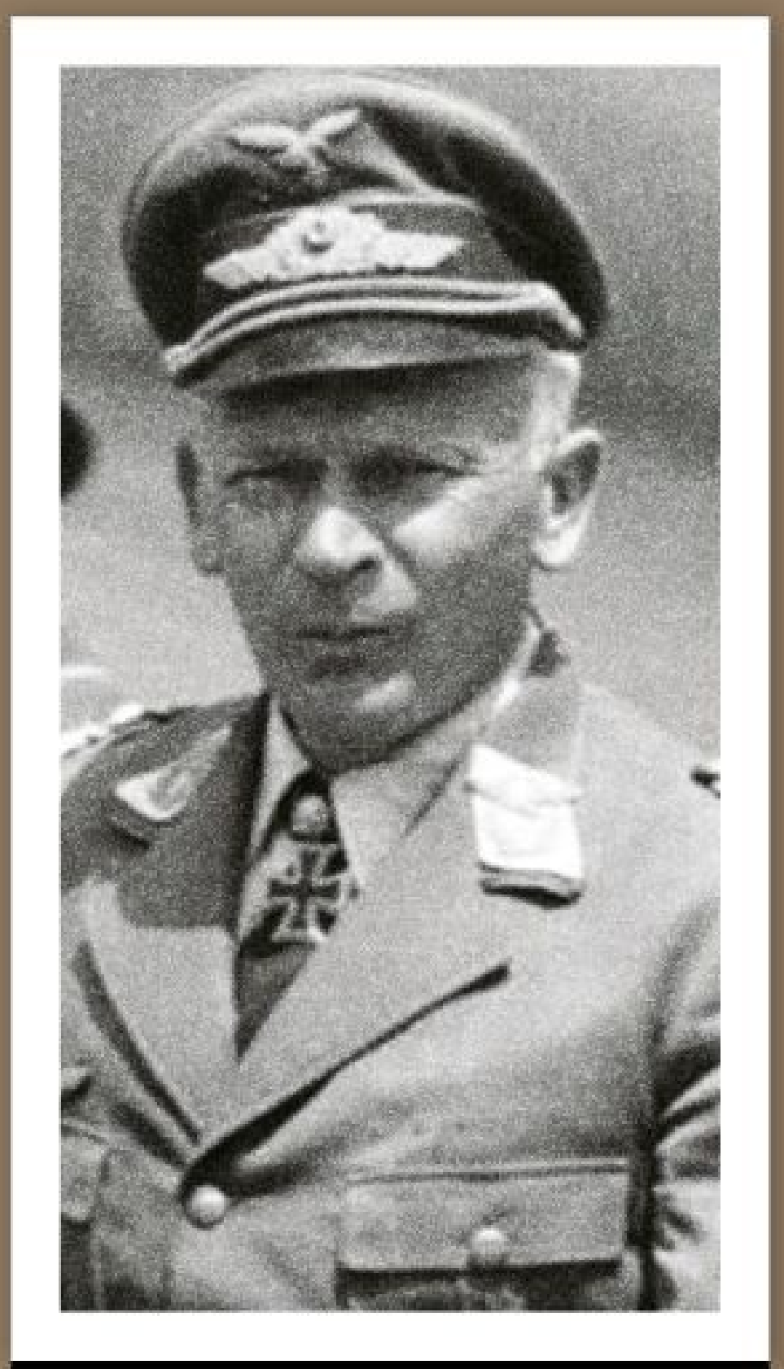
After making a high-speed dive from height, German pilots would then pull back on their stick, climb vertically until their engine was on the verge of a stall, then loop round into another dive. At the top of the loop they'd then roll their aircraft so it was the right way up as it began its next attacking dive.

Formation

In the popular imagination, the Red Baron was an acrobatic flyer and reckless daredevil, but in reality he was neither. A pilot of limited ability, he was risk averse, and with the exception of his final flight, someone who remained extraordinarily calm in combat. For the most part, he employed a simple strategy invented by his mentor Oswald Boelcke. Flying at the point of an arrow formation, Richthofen would attack from height with the Sun behind him. This gave him height, speed and visual advantage over his enemy, while his squadron, gathered around him, protected his flanks and rear.

The other Richthofens

Manfred may be the most celebrated Richthofen, but his relatives also made famous - and infamous - contributions to history



Above: Wolfram pioneered many techniques while he was with the Condor Legion

Wolfram Freiherr von Richthofen

Like his more-famous cousin Manfred von Richthofen, Wolfram started the war in a cavalry unit. After seeing action on both the Western and Eastern Front, and earning an Iron Cross for bravery, he found himself practically redundant by 1915.

In 1917, he followed Manfred and Lothar into the Flying Service and by 1918 was a trained fighter pilot. Assigned to the Red Baron's Flying Circus, he was lucky not to be killed on his first combat patrol, during which his cousin was killed. He survived the war and achieved top-gun status with eight confirmed kills.

Wolfram left the services after the war and studied for a doctorate in aeronautical engineering, qualifying in 1929. His doctoral thesis was a top-secret study on production techniques for building all-metal aircraft.

A keen admirer of Hitler, Wolfram was appointed chief of aircraft production for the Luftwaffe when the Nazis came to power in 1933. He then commanded the Condor Legion during the Spanish Civil War – overseeing its infamous bombing of Guernica – and became a field marshall of the Luftwaffe. Serving at the highest level throughout World War II, he was captured by American troops in 1945, dying shortly afterwards of natural causes.

Above: English ace Albert Ball crashed after shooting Lothar down in a dogfight. For propaganda purposes, Lothar was awarded the kill

Lothar von Richthofen

The past will always remember Lothar von Richthofen as the Red Baron's kid brother, but in many ways he more closely resembled the swaggering daredevil that his older sibling's legend represents. Although he had a similar upbringing to Manfred, he couldn't have been more different. Standing at well over six feet tall, he not only towered over his considerably smaller brother, but had a bigger personality to match.

Manfred was often described as detached, humourless and aloof – particularly as the war progressed – a man who seemed to live a celibate, almost monk-like existence. In contrast, Lothar was a fun-loving extrovert who proved to be far more impulsive in the air.

Although Manfred scored more kills, Lothar – who had considerably less air time due partly to long periods of convalescence – notched them up quicker. By the end of the war, he'd earned 40 kills despite having only been an active fighter pilot for about eight months. Brought down four times, he spent more time in the hospital than he did in the air. He survived the war but was killed in a flying accident in 1922, aged 27.

> "By the end of the war, he'd earned 40 kills despite having only been an active fighter pilot for about eight months"

In August 1916, Boelcke was scouring German airbases on the Eastern Front for pilots to join his newly formed fighter squadron the Jagdstaffel – literally 'hunting flight'. Only the best were selected, and by the time Boelcke returned to France, 23-year-old Manfred von Richthofen was sitting next to him.

As a young hunter in the wilds of Silesia, Richthofen had been encouraged to collect trophies of his kills. In his bedroom as a boy, stuffed heads of the animals he'd shot stared lifelessly down at him from every wall as he slept or played. It was a macabre practice that he carried over into his adult life – a life from here on in that would involve hunting humans.

In September 1916, while on his maiden mission with Boelcke, Richthofen claimed his first confirmed kill. After shooting down a British plane, he landed next to its wreckage and sliced the serial number from the skin of its fuselage with a hunting knife. Then, back at base, he ordered a silver cup from a jewellers as a trophy. It was a ritual he continued throughout the war – a cup for each plane and, whenever possible, a strip of canvas hacked from his dead prey's plane. The latter decorated the walls of his quarters – a gruesome reminder of the dozens that he'd killed.

Although not a great flyer, Richthofen was a predator par excellence, while the plane he did most of his killing from was, for a while at least, technologically superior to anything else in the skies. By late 1916, the Fokker Eindecker was being replaced by the Albatross biplane. Its 170-horsepower engine gave it enough power to carry not one but two synchronised machine guns, while its rigid fuselage meant its aerodynamics offered a unique edge in the aerial duels that the flyers were now calling dogfights.

Richthofen's other great advantage was Boelcke's brain. Known as the father of fighter tactics, Boelcke had developed a set of principles for surviving dogfights known as Boelcke's Dicta, which included such gems as "attack from height" and "use the cover of the clouds and the glare of the Sun." He also warned his flyers that "foolish acts of bravery" would get them killed.

Something Boelcke couldn't legislate for, however, was aerial accidents, and on 28 October 1916, he was killed in a mid-air collision during a chaotic dogfight over Northern France with some British pilots.

A month after Boelcke's funeral, Richthofen claimed his 11th kill – it was one that was to change his life. The shooting down of Britain's leading ace Major Lanoe Hawker VC in November 1916 elevated Richthofen to superstar status. With Boelcke gone, Imperial Germany's PR machine needed a new hero to dazzle its war-weary masses, and the young Prussian aristocrat got the job.

In January 1917, Richthofen claimed his 16th confirmed kill and became Germany's highest-scoring ace. Awarded the coveted Pour Le Mérite – a year to the day since Boelcke had received his – he was also given command of his own squadron – Jagdstaffel 11. He'd been a fighter pilot for less than six months.

Giddy with success, he now intended to lead his new squadron much as Boelcke had done, but with one crucial difference. "One fine day," he wrote, "I

Richthofen's brightly coloured plane stood out in the skies

"When the mist lifted at about 10.30am, the Red Baron led his Flying Circus into the skies. Within half an hour, its pilots were fighting for their lives against a flight of Sopwith Camels over the Somme Valley"

Australian troops pose with the wreckage of Richthofen's triplane shortly after it was shot down on 21 April 1918 came upon the idea of having my crate painted glaring red. The result was that absolutely everyone could not help but notice my red bird."

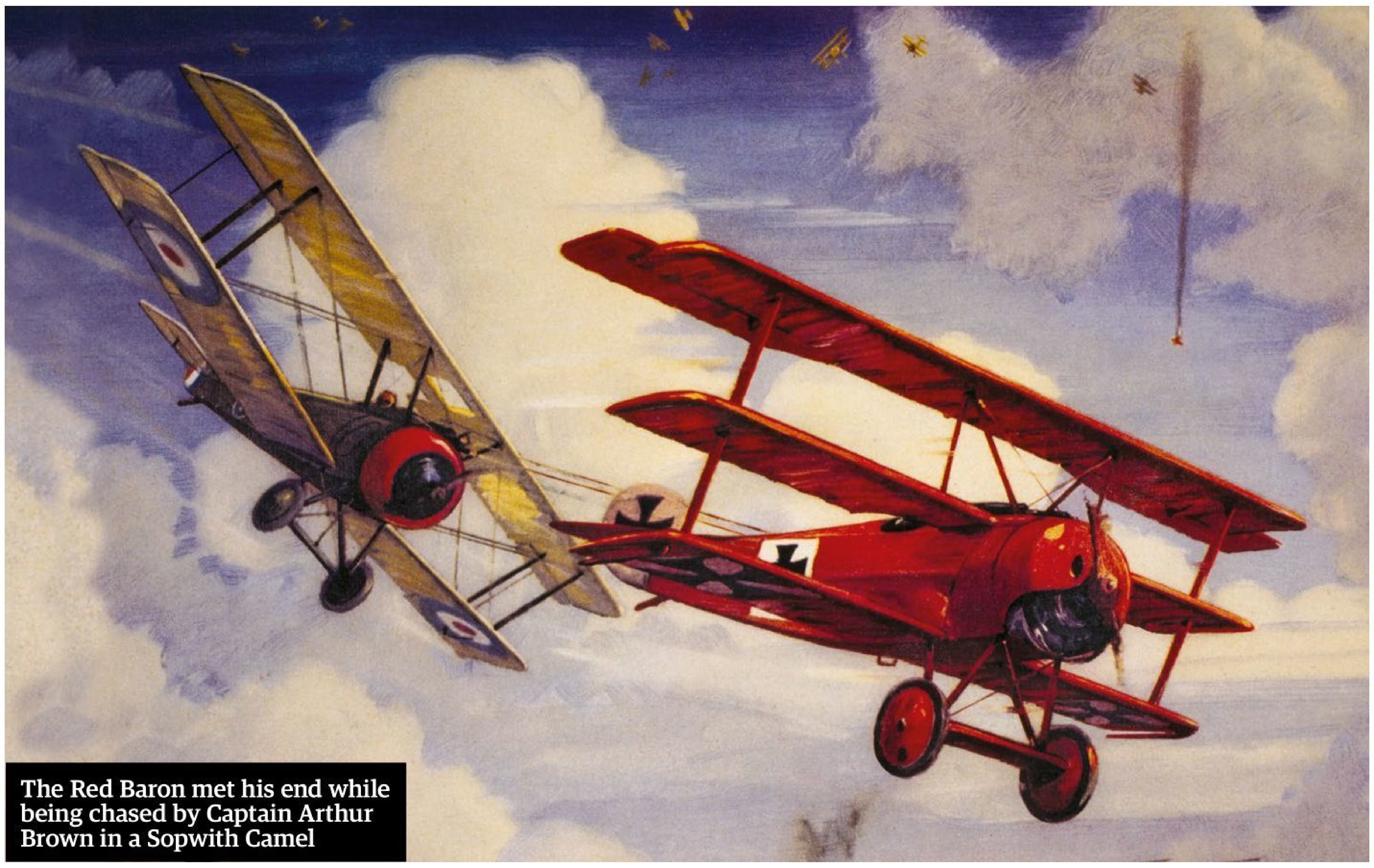
It was an audacious gesture, and Richthofen's men were rightfully concerned that his distinctive aircraft would make him an obvious target. They suggested painting all of their squadron's Albatrosses red, but Richthofen refused. They could customise their planes' liveries, he told them, but his plane alone would stalk the skies painted the colour of blood.

By April 1917, the skies were filled with Germany's new Albatross biplanes, and that month saw the British Royal Flying Corps suffer greater losses than in any other of the war. In four violent weeks, known as Bloody April, the corps lost 275 aircraft, a third of its entire force. Richthofen alone accounted for 21, taking his personal tally to 52, 12 past Boelcke.

The Red Baron, as the international press would soon call him, was ordered to go on leave. He spent his 25th birthday lunching with the kaiser and much of the rest of his time dictating his memoirs. The resulting book The Red Battle Flyer was so heavily edited by the authorities that Richthofen later distanced himself from it. His adoring public, however, swallowed every propagandised word and it became an instant best-seller.

In June 1917, Richthofen returned to the front as commander of Jagdgeschwader 1 – a new four-squadron fighter group. This new highly mobile force was allotted its own trains to transport it to different sectors of the front. Because it moved about on rails – as circuses of the day commonly did – it was dubbed the Flying Circus by the press, who by now were also portraying Richthofen and his men as chivalrous airborne knights who engaged their enemy in aerial jousts.

This was, of course, romantic tosh. In reality, this new air war was mortal combat fought three miles above the ground in experimental machines. It wasn't chivalry that ensured survival, but stealth. The winner was the man who successfully sneaked up on his rival and was able to put a bullet in his back. It was very deadly work and it soon took its toll on Richthofen.



The Red Baron met his end while being chased by Captain Arthur Brown in a Sopwith Camel

While on leave, the Baron had been shaken by the news that his younger brother Lothar, also a pilot, had been seriously wounded. Four months later it was Richthofen's turn to experience that fear. In July 1917, he was hit in the head during a routine dogfight. Temporarily blinded, he managed to land safely, but his injuries left him a psychological mess.

A living Red Baron, Germany's high command had long-since realised, was a powerful propaganda tool. They insisted he stay on the ground, but Richthofen's indoctrination would never allow him to just safely sit out a conflict. Not that he had any appetite left for action. "I'm in wretched spirits after every aerial combat," he wrote in his diary. "When I [land] again at the airfield I go directly to my room. I do not want to hear anyone or see anything. I believe that war is not how people at home imagine it... It is very grim."

Probably suffering from what today is called shell shock, Richthofen also had to cope with a shift of power in the skies. The British and French had been developing new aircraft to compete with the Albatross, and in the Sopwith Camel bi-plane had found one to match it. Germany's response was the Fokker Dr1 Triplane. Although faster and more agile than the Albatross, it was, however, fatally flawed. Poor visibility, handling difficulties and excess drag all made it a good plane to get killed in. By the end of 1917, the highly skilled Richthofen was the sole surviving member of the squadron Boelcke had raised the previous summer.

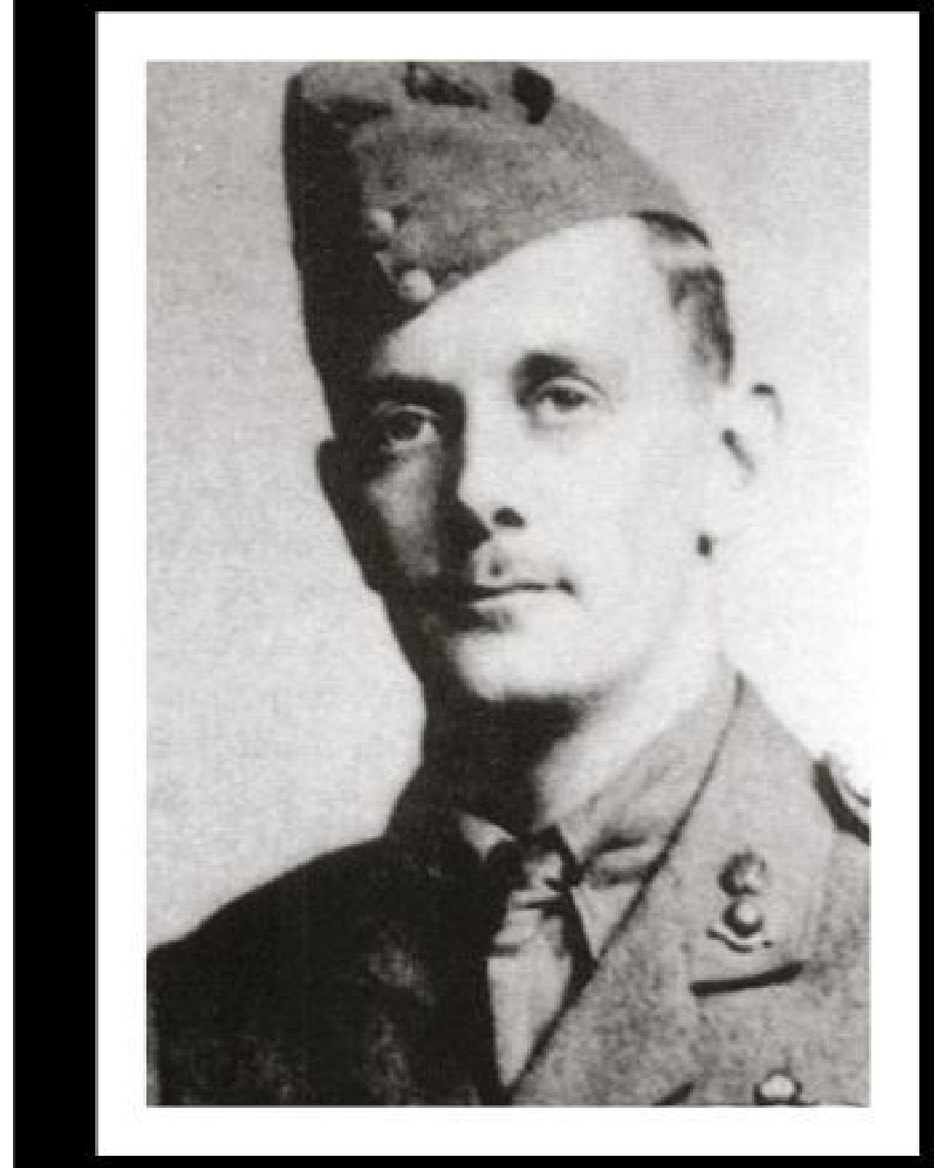
With his friends gone and afflicted by daily headaches due to his wounds, Richthofen responded in the only way he knew how. He retreated ever further into himself, and pushed himself ever harder. By 20 April 1918, he claimed

The Baron's rivals

Many Allied airman hunted the skies for Richthofen in the hope of ending his reign of terror

Major Lanoe Hawker VC

British



Hawker was the first Briton to achieve 'ace' status. He had seven credited victories when he encountered Richthofen on 23 November 1916. After a lengthy dogfight during which Richthofen fired 900 rounds, Hawker, running low on fuel, made a break for his own lines. Richthofen followed, and after having to hit his jammed guns with a hammer to get them working again, fired one last burst at Hawker, blowing a hole in the back of his head.

Captain Albert Ball VC

British

With 44 confirmed and 25 unconfirmed kills, Ball was, when he died, Britain's leading ace. Often hunting the skies as a 'lone wolf', he frequently took on multiple enemies at a time. On 7 May 1917, his flight jumped several planes of the Flying Circus. The Red Baron wasn't there that day, but his brother Lothar was, and Ball shot the younger Richthofen down before being killed himself. The Red Baron described him as "by far the best English flying man."

Captain Roy Brown DSC

Canadian

Brown is largely credited with finally bringing the Red Baron down, although it's more likely the German ace was killed by ground fire. He was an experienced leader who claimed ten confirmed kills – Richthofen being the last. Equally impressive was the fact that in just over a year of leading men in aerial combat, he didn't lose a single pilot. Despite being badly injured in a crash in July 1918, he survived the war.

The British buried Richthofen with full military honours. In 1925, his body was disinterred and reburied in Berlin

his 80th scalp. However, it was to be the Red Baron's last.

The following day was a Sunday. Fog delayed takeoff, and as Richthofen waited to go up, he approached his newest recruit - his 22-year-old cousin Wolfram von Richthofen, who'd never flown in combat before. In the event of enemy contact today, he told him, he was to stay out of it. Observe, learn, by all means, but most importantly, survive.

When the mist lifted at about 10.30am, the Red Baron led his Flying Circus into the skies. Within half an hour, its pilots were fighting for their lives against a flight of Sopwith Camels over the Somme Valley. Wolfram watched the fray from a safe distance, little suspecting that there might be another rookie pilot in the air that day with similar orders. Orders that he'd choose to disobey.

On seeing May's Sopwith hurtling towards Wolfram's helpless triplane, Richthofen yanked his own plane around and set his sights on the man and plane that was trying to kill his cousin. When May's guns jammed in the dive, however, the young Canadian's courage evaporated and he turned and fled - with an outraged Richthofen giving furious chase.

"The first thing I knew I was being fired on from the rear," May recalled afterwards. "I noticed it was a red triplane but if I'd realised it was Richthofen I'd have passed out on the spot. I kept dodging and spinning from about 12,000 feet until I ran out of sky... Richthofen was firing at me the whole time."

As Richthofen pursued May, he broke every rule in Boelcke's Dicta. Lured out from his own lines at low level into an Australian-controlled sector, his plane attracted overwhelming ground fire. Worse still, the great hunter was now being hunted. On seeing what was unfolding, May's CO Captain Brown had dived to his rescue. Closing in behind Richthofen, he opened fire, just as bullets from the trenches also ripped through the Red Baron's plane.

Moments later, Richthofen was dead, hitting the ground with a bounce and a skid. Australian infantrymen rushed to examine the wrecked aircraft. Inside they found a small, young pilot still clinging to its controls who had been killed by a single bullet to the heart.

Nobody can be sure who it was that killed Manfred von Richthofen. What is certain, though, is that his death ensured his immortality. If the futility of the slaughter in the trenches represented all that was bad about humanity, his intoxicating story in the skies embodied something better. With its high-altitude heroics, brightly painted planes and imagined chivalry, it offered something more hopeful.

Perhaps uniquely, his passing was commemorated by both sides. In Germany, the nation mourned, while the British buried him with full military honours marking his grave with a wreath that read: "Our gallant and worthy foe." Richthofen the man may have been dead, but his legend would chime on through history.

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War in Numbers

The Red Baron

80 ◂THE NUMBER OF PLANES HE SHOT DOWN

59 THE NUMBER OF PLANES HE SHOT DOWN IN A BI-PLANE ▸

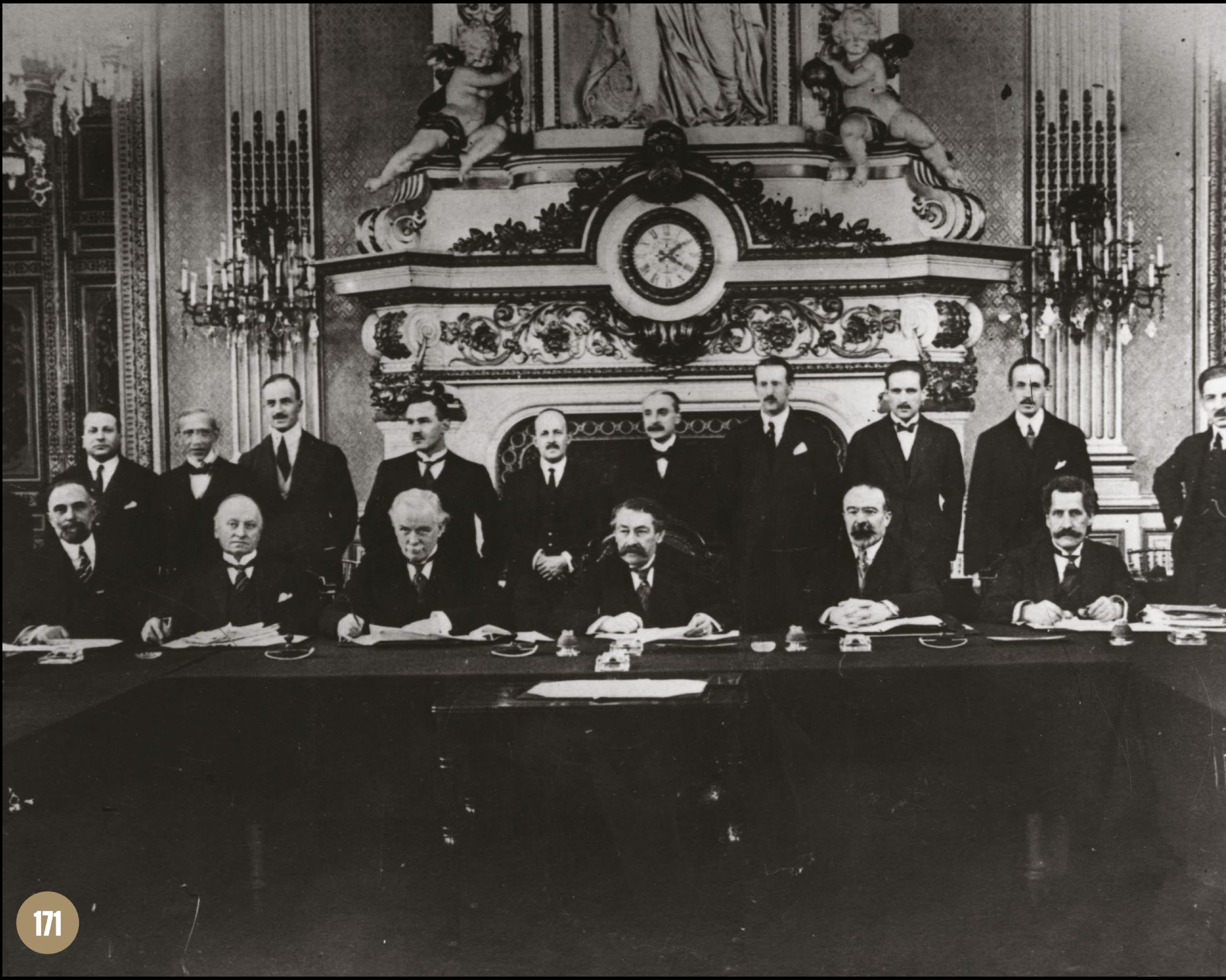
123 ▴THE NUMBER OF MEN HE SHOT DOWN

79 ◂ THE NUMBER OF MEN HE KILLED

14 THE NUMBER OF TIMES HE KILLED MORE THAN ONE MAN IN A SINGLE DAY ▸

4 ◂THE HIGHEST NUMBER OF KILLS HE GOT IN A SINGLE DAY

24 ▴THE NUMBER OF HOURS FLIGHT TRAINING GOING SOLO – AND CRASHING!



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End of an era

The aftermath and legacy of the First World War

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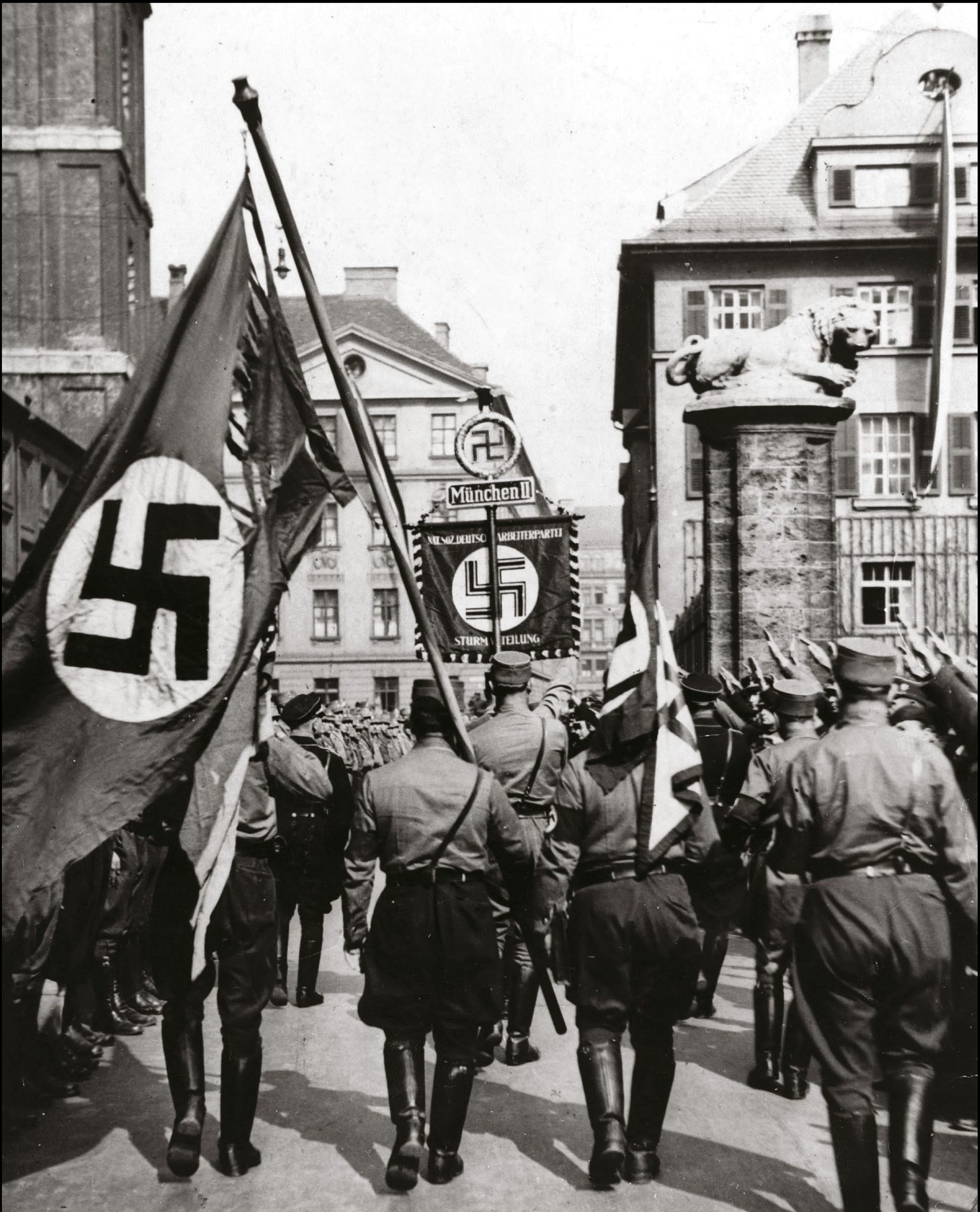
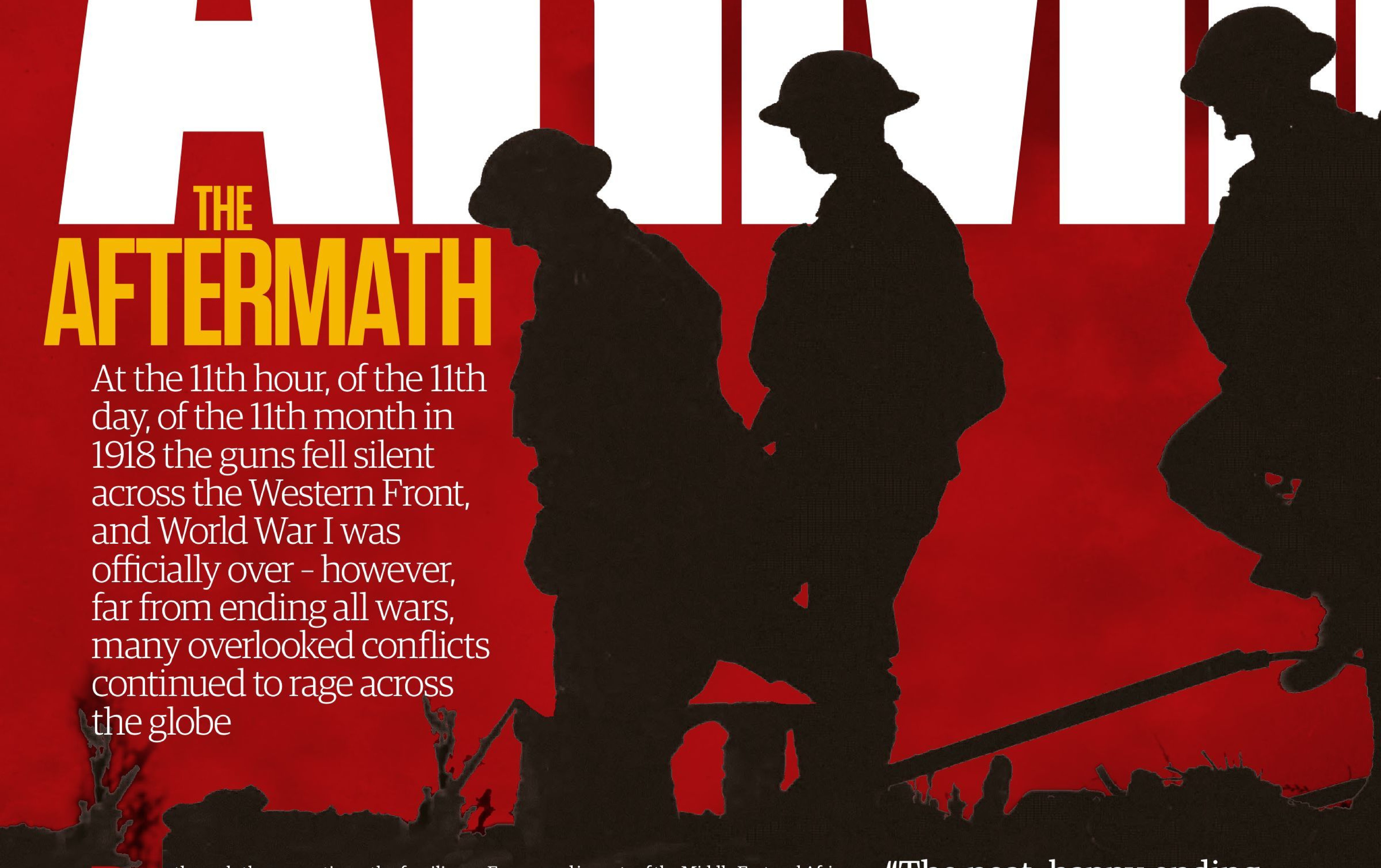
168 **Armistice: The Aftermath**

Far from ending all wars, many overlooked conflicts continued to rage across the world after World War I


München II
NAT.SOZ.DEUTSCHE ARBEITERPARTEI
STURM TEILUNG

ARMIS



THE AFTERMATH

At the 11th hour, of the 11th day, of the 11th month in 1918 the guns fell silent across the Western Front, and World War I was officially over – however, far from ending all wars, many overlooked conflicts continued to rage across the globe

Down through the generations, the familiar story told of the Great War is retold time and time again. Unfortunately, the neat, happy ending of World War I was anything but for people all over the world. Across Eastern Europe and the Middle East fighting continued, on and off, into the 1920s, as actors on the ground sought to either enforce the political agreements made at the end of the war, or to overturn or influence decisions they felt were unfavourable to them. Here, we look at a handful of conflicts in the post-war period, reminding us that the end of one war too often simply sets the scene for the next one.

When WWI ended, the armed forces of most belligerent countries were still scattered all over Europe and in parts of the Middle East and Africa. Many of the German armies that had been left strewn across Eastern Europe and western Russia simply chose not to head home, but instead operated as independent armies pursuing their own political objectives. The West Russian Volunteer Army was one such unit. Nominally allowed to remain in the Baltic after the war to carry on the fight against the Bolsheviks in Russia, this force chose to largely ignore this mandate and instead charted a more independent path.

> "The neat, happy ending of World War I was anything but for people all over the world"

Commanded officially by General Pavel Bermondt-Avalov, a Cossack from Tiflis in Georgia, the West Russian Volunteer Army launched a campaign to secure an independent state or fiefdom of its own, briefly announcing the creation of a new West Russian state based in Riga, Latvia, and printing its own currency. The army quickly won fame after its initial successes in the Baltic and was frequently referred to simply as 'the Bermontians' in honour of their warlord-like commander. The West Russian Volunteer Army did not last long, however. After successfully invading Latvia and occupying at least part of Riga, it was defeated and driven back, with the support

STICE

both of British warships firing from Riga's harbour and reinforcements from Lithuania and Estonia aiding the Latvians.

However, there is more to this brief campaign than is at first obvious. Instead of an independent army of people from western Russia, as it presented itself, the West Russian Volunteer Army was in reality 80 per cent German (roughly 40,000 Germans to 10,000 Russians and others). Its real commander was not even Bermondt-Avalov, but was instead the German General Rüdiger von der Goltz, a relative of the famous Colmar von der Goltz who had spent much of his professional life working with and training the Ottoman army, before dying of typhus in Baghdad in 1916. The much younger Rüdiger von der Goltz had been covertly tasked with securing a German foothold in the Baltic, and if possible reasserting German control over the newly independent Baltic states.

Ultimately he failed and was compelled to withdraw back to Germany, along with the other Freikorps, many of whom found themselves fighting in German streets in an undeclared civil war into the early 1920s. Von der Goltz was just one of a large number of actors scrambling for power, influence, and even state-building, in the chaos that engulfed Eastern Europe in the aftermath of World War I.

> "The West Russian Volunteer Army was in reality 80 per cent German"

The brutal birth of the USSR

When discussing conflicts that persist after World War I you have to start with the largest and probably the most influential of them all: the Russian Civil War. The start of the story is universally well known, but is far too often not told to completion. In March 1917 the February Revolution dethroned the Romanovs, and in their place was installed a Provisional Government. This continued to fight the war, despite a crumbling army infrastructure and a severely compromised command structure. The

Men and women of the Red Army march to the front during the Polish-Soviet War. The Soviet counter-offensive threatened to extend the Red Army's control further into Europe

> "The Provisional Government made one last desperate move with the Kerensky Offensive, named after Minister of War Alexander Kerensky, in July 1917. The result was a catastrophe"

Provisional Government made one last desperate move with the Kerensky Offensive, named after Minister of War Alexander Kerensky, in July 1917. The result was a complete catastrophe.

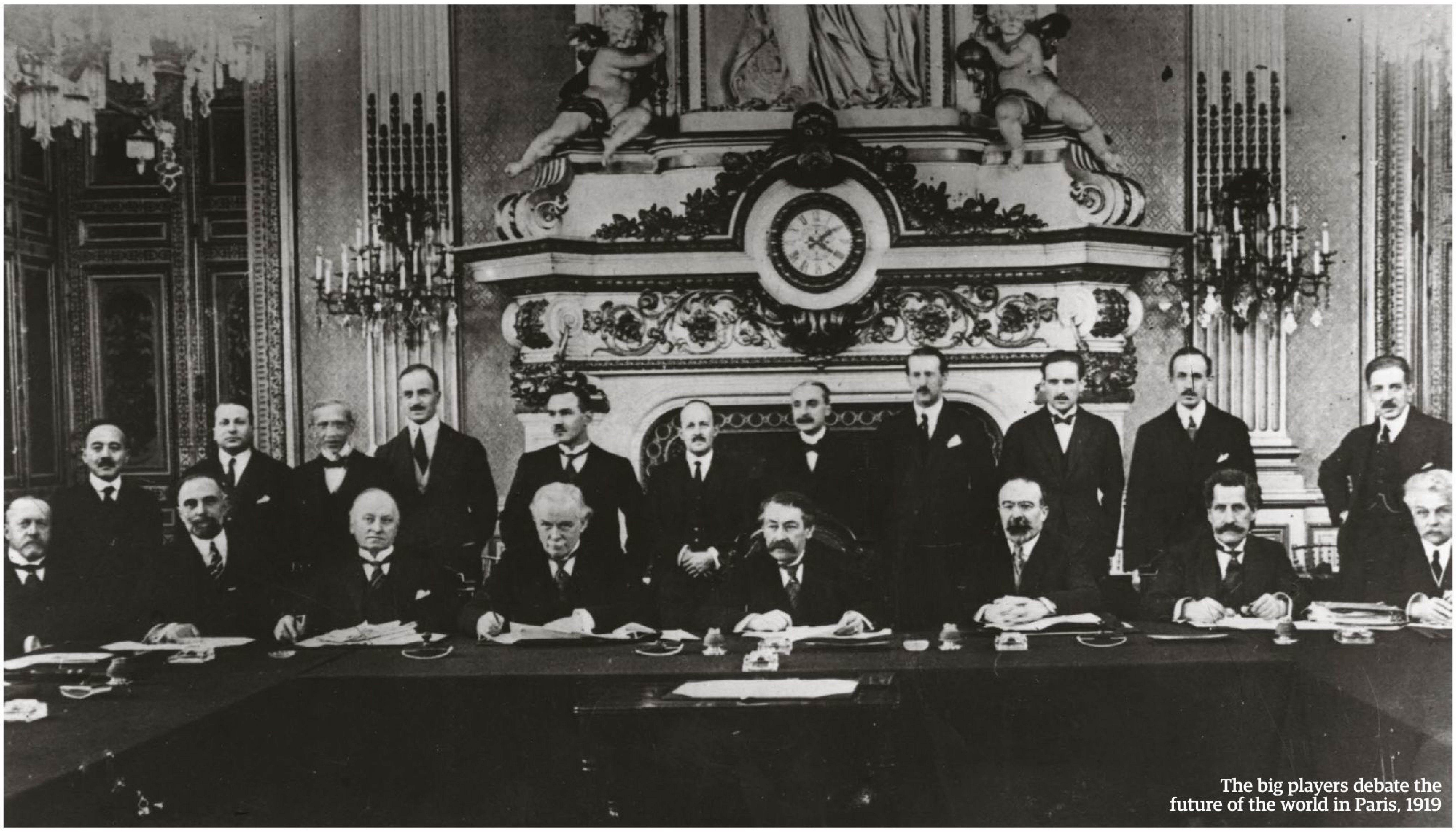
Despite the offensive being led by General Aleksei Brusilov, who had won important successes in 1916 in Galicia, the old Russian army simply could no longer function as a fighting force. The disastrous effects of General Order No. 1 (which took power, and even weapons, out of the hands of officers and put it in the hands of soldier collectives), along with the huge blow to morale that came with political chaos and uncertainty, had paralysed the Russian army and critically reduced its efficacy.

The failure of the Kerensky Offensive severely weakened the Provisional Government and increased the relative power and influence of more radical groups like Vladimir Lenin's Bolsheviks, who launched their own revolution (the October Revolution) in November 1917. The Bolsheviks ousted the Provisional Government and handed power over to the soviets organised by workers, soldiers and peasants across Russia.

This is usually where the story ends for most people: the Bolsheviks are in control and it is a straight line from Lenin, through Stalin and Khrushchev, and on to the collapse of the USSR. In reality, however, the Bolshevik capture of Saint Petersburg and Moscow left most of the rest of Russia in stark opposition to the revolution. Groups from all across Russia fought back against the Bolsheviks, broadly grouped into three categories: the Whites (a mix of largely independent armed forces, ranging from old Tsarist loyalists to armies of over a dozen external powers, including the British, Americans and Japanese); the Greens (peasants); and the Blacks (anarchists).

On paper the Bolsheviks (the Reds) were no match for the vastly larger and in many cases well-funded forces arrayed against them. They had a few key advantages, however, that eventually secured them victory. The Bolsheviks held a central position, in control of the two most important cities in the country and the surrounding countryside. This not only gave the Bolsheviks access to a relatively large population of potential fighters but also, more importantly, gave them access to the best rail networks in the country. The Bolsheviks could exploit internal lines, meaning that if they needed to move troops from one front to another the distance they needed to travel was much shorter than the distance their opponents would have to move

Below: Camel cavalry in Syria, 1940. Troops like these were critical to waging war in the region, including back in World War I



The big players debate the future of the world in Paris, 1919

Paris Peace Conference

Representatives from 32 different powers, great & small, gathered in Paris in 1919 to decide the fate of the world. Their success & failure is still debated

The Paris Peace Conference was the primary means by which politicians sought to reshape the world after the end of World War I. It was a chance for powers that felt they had been marginalised to assert their independence, and an opportunity for imperial powers to further extend their global influence. This fundamental contraction caused significant problems for many of the key geographical areas the diplomats in Paris needed to address. While many could agree to the basic justice of United States President Woodrow Wilson's call for 'national self-determination', the actual implementation of this ideal – the creation of a bunch of new nation-states – was enormously complex. How would one determine new national borders? Was it to be based on where ethnic or linguistic populations happened to currently be living? This was enormously fraught due to the highly heterogeneous nature of places like Eastern Europe. These regions were far more ethnically heterogeneous in 1919 than in the modern day – a result of multiple rounds of ethnic cleansing after World War I, again during World War II, and finally yet again in the aftermath of World War II. Should borders be based on historical analogue states? If so the borders of empires like Poland-Lithuania and other Eastern European states and empires were bound to overlap, forcing people on the ground to determine where borders should lie by force of arms. This ambiguity set the stage for the widespread violence after World War I officially ended.

across if they wanted to consolidate their forces. The access to good quality rail lines and rolling stock also meant that, despite being outnumbered, the Bolsheviks could generally muster local numerical superiority as and when needed. This was a major strategic advantage that acted as a significant 'force multiplier'.

Perhaps most important of all was the unity of the Bolshevik forces relative to their opponents. The White forces were an enormously heterogeneous combination of armies of wildly varying quality, with many divergent political goals. Nationalist forces in Poland and Ukraine sought to establish or expand their independence from Russia. Tsarist forces nominally fought for a return of the Tsarist monarchy, although more than a few monarchist leaders were really acting like medieval warlords fighting as much for their own power and prestige as anything else. International intervention forces had little stomach for any real fighting. Most of them having suffered enough in World War I, and generally failed to effectively coordinate with the dizzying array of Russian-led forces fighting the Bolsheviks (the comparison to Syria today is unavoidable).

> "Despite being outnumbered, the Bolsheviks could generally muster local numerical superiority as and when needed"

Meanwhile, the Greens were poorly armed and poorly organised peasant armies often fighting simply for the preservation of their farmland and crops. The Greens, for all their bravery, were frequently misled by other armed forces. Bolshevik forces would on occasion raid peasant lands for food (the one thing the Bolsheviks were regularly in short supply of, being primarily an urban movement) loudly proclaiming themselves to be part of the Red Army. Other Bolsheviks would then later return to those same farms and villages and give some of the food back, proclaiming their largess to be done on behalf of the Bolsheviks, inviting cheers from the peasantry of 'Down with the Reds! Up with the Bolsheviks!'. If only they knew.

The Russian Civil War rumbled on for three years, until the Bolsheviks secured victory and the stabilisation of what would become the Union of Soviet Socialist Republics – the USSR. The fundamental geo-political paradigm of the 20th century, the global contest between communism and free market capitalism and democracy, thus began. The war did not end, however, before the fledgling Soviet state found itself in an unintentional war of conquest against an expansionist Poland. Newly independent Poland, like many of the other new states in Eastern Europe, recognised that the chaos that had erupted across the region was actually a fleeting opportunity to press territorial claims for a greater Poland, on par with the medieval powerhouse state of Poland-Lithuania that had dominated Eastern Europe and the Baltic five centuries earlier.

Seeing the apparent weakness of Russia, Polish forces marched east and hoped to extend their borders at Russia's expense. The fighting in this war, in some ways, pitted the war-fighting methods of modern, mass armies (for which the Soviets would become famous) with the more methodical, technology-obsessed war-fighting of the Western Front. Heavily supported with arms, munitions and even military leadership from a triumphant French army, the Polish forces soundly defeated a Soviet counter-invasion that had very nearly wiped Poland off the map as quickly as it had reappeared. It would be one of the few times Poland was in a position to successfully repel Russian invaders.

Turkey and the Middle East

The situation just on the other side of the Black Sea was scarcely better. The Treaty of Sèvres, signed in 1920, had not merely dismantled the old Ottoman Empire – it fundamentally reshaped the Middle East in ways that we are still dealing with today. The Ottoman state, which had stretched from Spain, across North Africa, down the Arabian Peninsula, into the Balkans, and out to the borders of Persia, was reduced to a tiny rump state in central Anatolia. Gone was control of the Bosporus, that most critical waterway for every power in the Black Sea region. Gone was control of the southern Anatolian coast and access to the Mediterranean.

> "The Treaty of Sèvres, signed in 1920, had not merely dismantled the old Ottoman Empire, it fundamentally reshaped the Middle East in ways that we are still dealing with today"

The east was given up to an independent Armenian state. Instead, land that had been in Ottoman possession since the Middle Ages was given over to international control (in the case of the Bosporus), or split between the French and the Italians (in the case of the southern coast). The Italians made the most significant push to assert their influence in Anatolia. Italian forces landed at Antalya, and for a brief time controlled a substantial swathe of territory hundreds of kilometres from the sea all along the southern coast of Anatolia.

Embarrassingly, Turkey even ceded land to the Greeks in western Anatolia. Citing the need to protect the sizable Greek population in and around the city of Smyrna, Greek forces landed at Smyrna in May 1919 and won the right, through the League of Nations, to operate a sort of protectorate over Smyrna and the surrounding lands for an undetermined length of time. Somehow unsatisfied with the first Greek expansion into Asia Minor in millennia, Greek forces pressed on, put together a capable army and invaded central Anatolia, vaguely marching towards Ankara, the capital of the new Turkish state.

The Greek plan, in the most generous reading, was unclear. It seems inconceivable that Greek

THE WORLD AT WAR

THE END OF WWI SHIFTED THE FIGHT TO SMALLER POWERS SPREAD OUT ACROSS EUROPE & THE MIDDLE EAST

Polish-Soviet War

POLAND 1919 – 1921

One of a series of border-setting wars in Eastern Europe, the Polish-Soviet War was in many ways the most dramatic. Starting on the back of the Polish-Ukrainian War of 1919, which saw Poland successfully push its borders eastward while the diplomats in Paris were still debating the future of the world, the Polish-Soviet War nearly saw the Soviets create an Eastern Europe similar to the one that would exist after 1945. The introduction of French arms, including Renault FT-17 tanks (creating the first ever Polish armoured units), helped turn the tide of the war after initial Soviet successes, securing the survival of the Polish state, at least until 1939.

Russian artillery during the Polish-Soviet War, stationed near the Bug River

Irish War of Independence

IRELAND 1919 – 1921

Egyptian Revolution

EGYPT 1919

The Senussi War

SOUTHERN LIBYA 1914 – 1920

In 1914 the Senussi, a sect of Islam, declared jihad against the Europeans in the eastern Sahara. Fighting raged across Algeria, Tunisia, Chad, Niger, Sudan and Egypt before finally coming to a close in 1920.

United States occupation of Haiti

HAITI 1915 – 1934

Russian Civil War

RUSSIA 1917 – 1922

By far the largest of the wars that carried on after the end of World War I. Vast numbers of men and armaments were arrayed across a conflict stretching from Eastern Europe all the way to Central Asia. At least 7 million combatants took part at one point or another, ranging from dozens of different nations, fighting for a wide range of different reasons. Some fought for independence and survival, others for fame, wealth and glory. Still others fought to carry on the work of the revolution and carry Marxist-Leninism into reality.

Admiral Kolchak, an important White Russian commander, reviews his troops in 1919

Mustafa Kemal Atatürk reviewing his troops before battle with the Greeks in western Anatolia

Turkish War of Independence

ANATOLIA, 1919 – 1923

The Ottoman Empire famously broke into the world of European politics in 1453 with the capture of Constantinople and the final extinguishing of the last, faint embers of the ancient Roman Empire. To find themselves reduced from a great empire that stretched across three continents to a tiny ethnic state in central and northern Anatolia in 1919 was unbearable and untenable. Under the leadership of Mustafa Kemal the Turks would eventually reassert their status and geographical integrity in wars against the French, Italians and Greeks after the end of World War I.

The Ngolok rebellions

CHINA 1917 – 1949

Iraqi Revolt

IRAQ, MAY – OCTOBER 1920

> "Some fought for independence and survival, others for fame, wealth and glory"

Creation of Saudi Arabia

SAUDI ARABIA 1916 – 1930

Getting its start with the Arab Revolt in 1916, the House of Saud, like many other powerful families, jostled for power and influence in the region. It took a series of wars before they were able to unite the Najd and Hedjaz into the modern state of Saudi Arabia.

Amritsar Massacre

AMRITSAR, INDIA 1919

Franco-Syrian War

SYRIA, MARCH – JUNE 1920

Part of the broader fallout from the collapse of Ottoman supremacy in the Middle East, the Franco-Syrian War ensured French control over Syria, rather than control over the Arab king Faisal.

Henri Gouraud, left, surveys the fields of the Western Front. He would play a key role in extending French imperial control over Syria in 1920

Map: Rocio Espin

Vladimir Lenin giving a speech in Red Square, Moscow, on 25 May 1919. The speech was celebrating the first anniversary of the creation of Soviet armed forces

forces could have effectively conquered and occupied a vast, interior country without easy access to the sea. Was their intention to conquer all of Anatolia, extending Greek influence into a region that was last truly Greek under the reign of Alexander the Great and his Seleucid progenitors?

In any event, the Greeks would come up against Mustafa Kemal Atatürk, who put any Greek dreams of a return to imperial glory quickly in their place. Atatürk was an experienced military officer who had seen action in Libya in 1911 when, as a relatively junior officer, he snuck through the deserts of Egypt into Saharan Libya and organised a force of nomadic warriors to continually harry and harass the Italian invaders.

Atatürk was experienced in turning nothing into something, in building new, effective forces and leading them to perform far beyond what they would have been capable of otherwise. Within three years Atatürk and his armies had conquered back all of Anatolia, finally declaring victory after defeating the last of the Greek forces at Smyrna in 1922. The Treaty of Lausanne was quickly agreed upon and signed shortly after, in 1923, enshrining the modern Turkish borders we know today.

Below: King Faisal (centre) with Lawrence of Arabia (second from right), advisors and his African slave at the Paris Peace Conference, 1919

> “Middle Eastern, principally Arab, leaders across the region pressed their case and fought to assert their independence”

Similar jostling and fighting occurred across the Middle East in the period after the end of World War I. It is popular to point to landmark agreements like Sykes-Picot, or the mandate system established by the League of Nations, to imply that the borders of the Middle East were imposed by foreign (European) powers, with no input from the Arabs and others who actually lived in the region. Nothing could be further from the truth. Middle Eastern, principally Arab, leaders across the region pressed their case and fought to assert their independence. Most famous of them was King Faisal of Syria and later Iraq. Faisal Ibn Hussein bin Ali al-Hashemi was born in Mecca to the grand sharif of Mecca in 1885. During World War I he became involved in the Arab Revolt, ultimately leading the Northern Army of the Arab rebels, fighting in Jordan and Syria. Throughout the war Faisal seemed to play each side off each other in his bid for personal power and influence. Faisal at different times nominally fought on behalf of his father's bid for a pan-Arab kingdom, at other times was happy to side more closely with the British, and on yet other occasions treated with the Ottomans in the hopes of being allowed to rule Syria as a vassal of the Empire.

With the end of the war and the political future of the Middle East still in question Faisal found himself proclaimed king of Syria in March 1920 by the Syrian National Committee. The very next month saw Syria handed over to France as a 'mandate' protectorate, leading to the brief Franco-Syrian war as both sides sought to assert their right to control the country. The war came to a climax on 24 July 1920 when French forces, under the command of the venerated General Henri Gouraud, who had lost his right arm and half of his leg during the Dardanelles campaign, decisively defeated the Arab forces at the Battle of Maysalun.

French tanks formed up in the centre, flanked on either side by infantry, and advanced against the Arab camel cavalry. Initially the going was tough as Syrian artillery caused substantial problems for the French infantry (many of whom were West African tirailleurs sénégalais) and armour alike, but over time French artillery gained superiority and eventually decided the day. The Syrian line broke, their minister of war, Yusuf al-Azma, was killed, and the fleeing Syrians were harried by French aircraft, ensuring the finality of the rout.

This would not be the last battle to decide the fate of the Middle East in the 1920s – the British would face similar wars and rebellions in Aden and Iraq – but it set the scene for the low-level conflicts that would rumble on through the early 1920s. As in Eastern Europe, World War I did not end in the Middle East on 11 November 1918. Instead, the ending of the Great War simply set the stage for the next round of conflicts to determine the geo-political landscape of the 20th century.

Images: Alamy, Rocio Espin, Getty

DEFINING MOMENT

THE SIGNING OF THE TREATY OF VERSAILLES

The Hall of Mirrors in the Palace of Versailles was an appropriate venue for signing the peace treaty that would end “the war to end all wars”, holding, as it could, many hundreds of dignitaries. Few of those featured in this photograph could have realised that the treaty would lead to far greater destruction just two decades later.

28 June 1919

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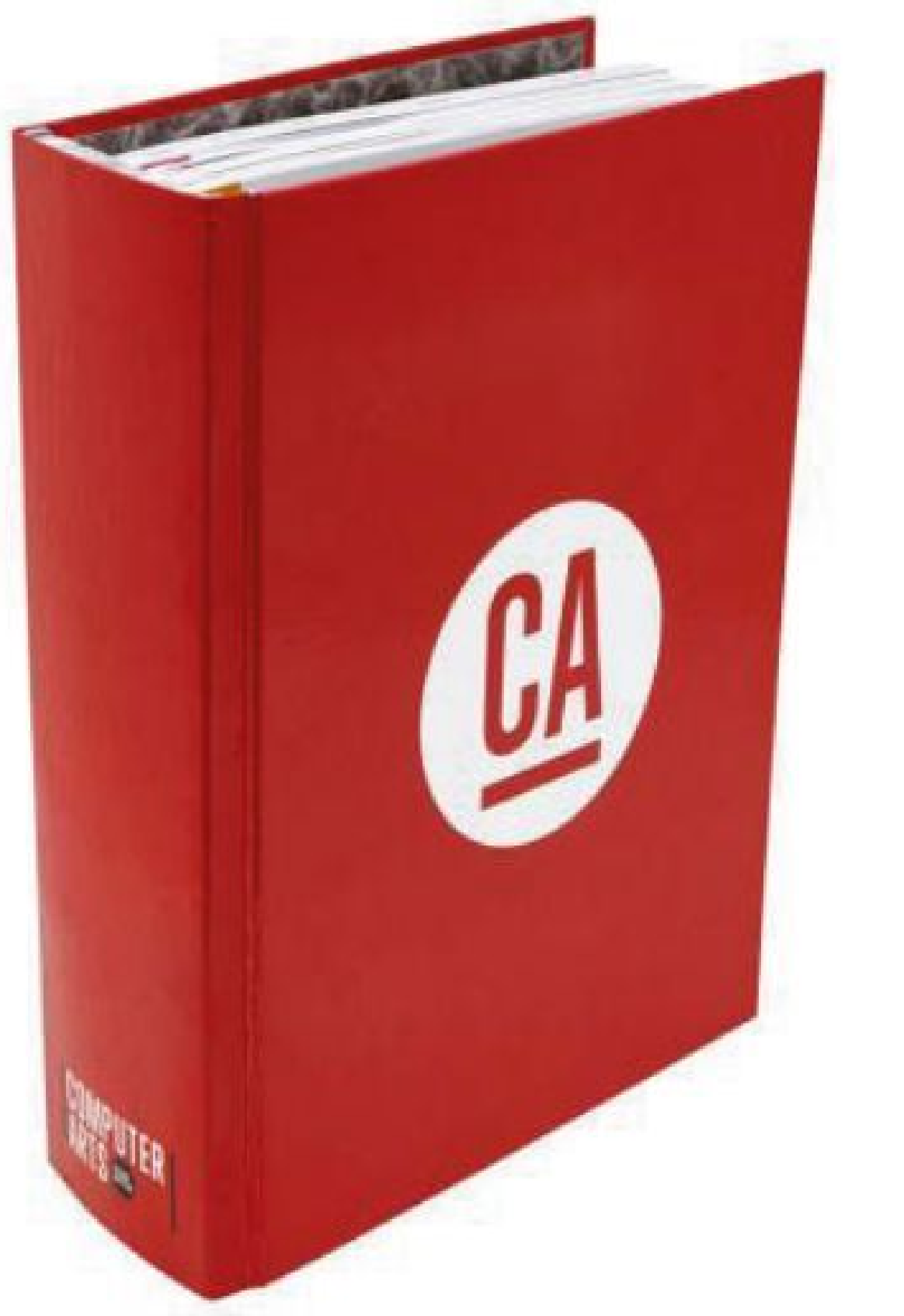

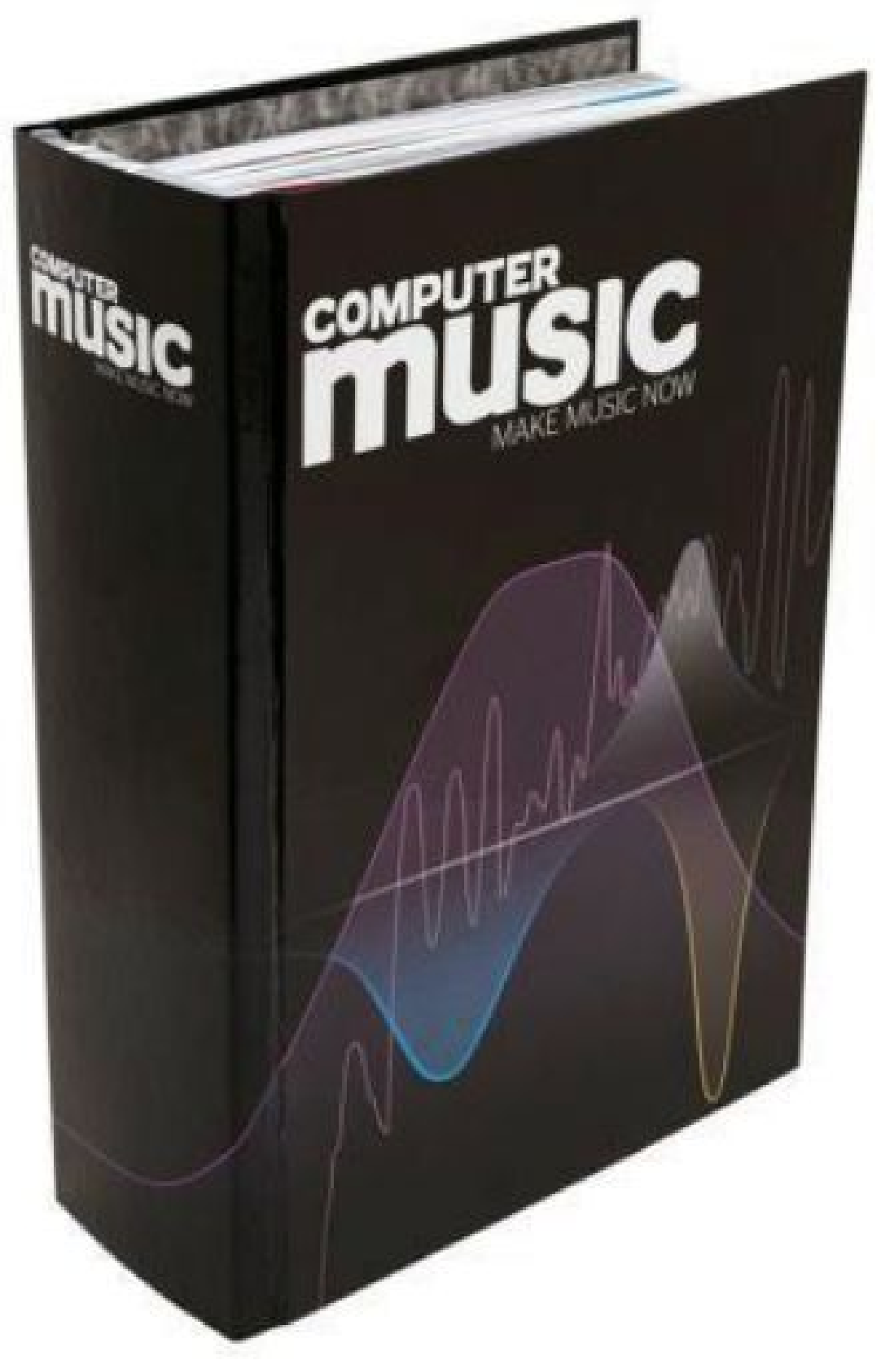
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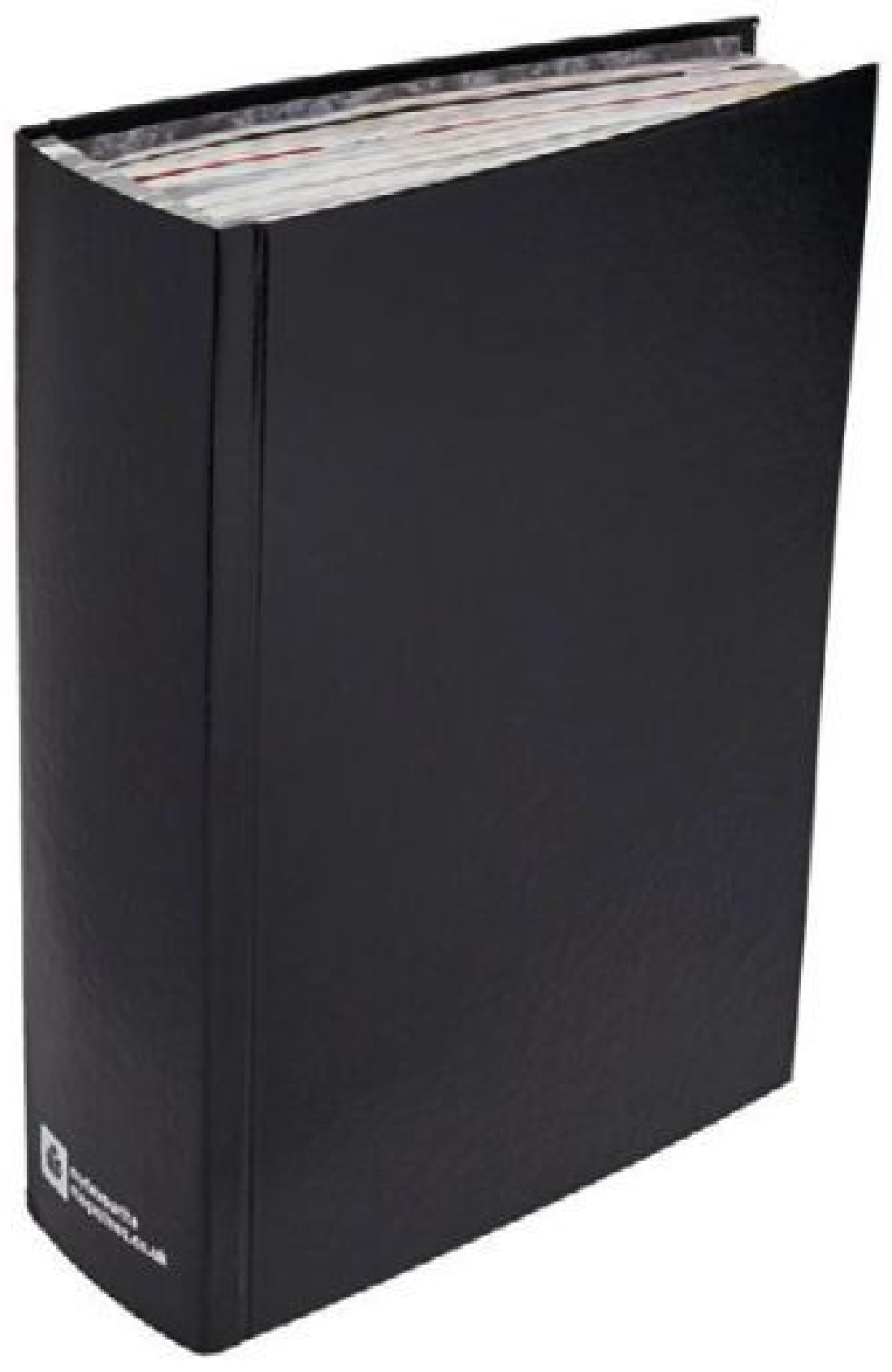

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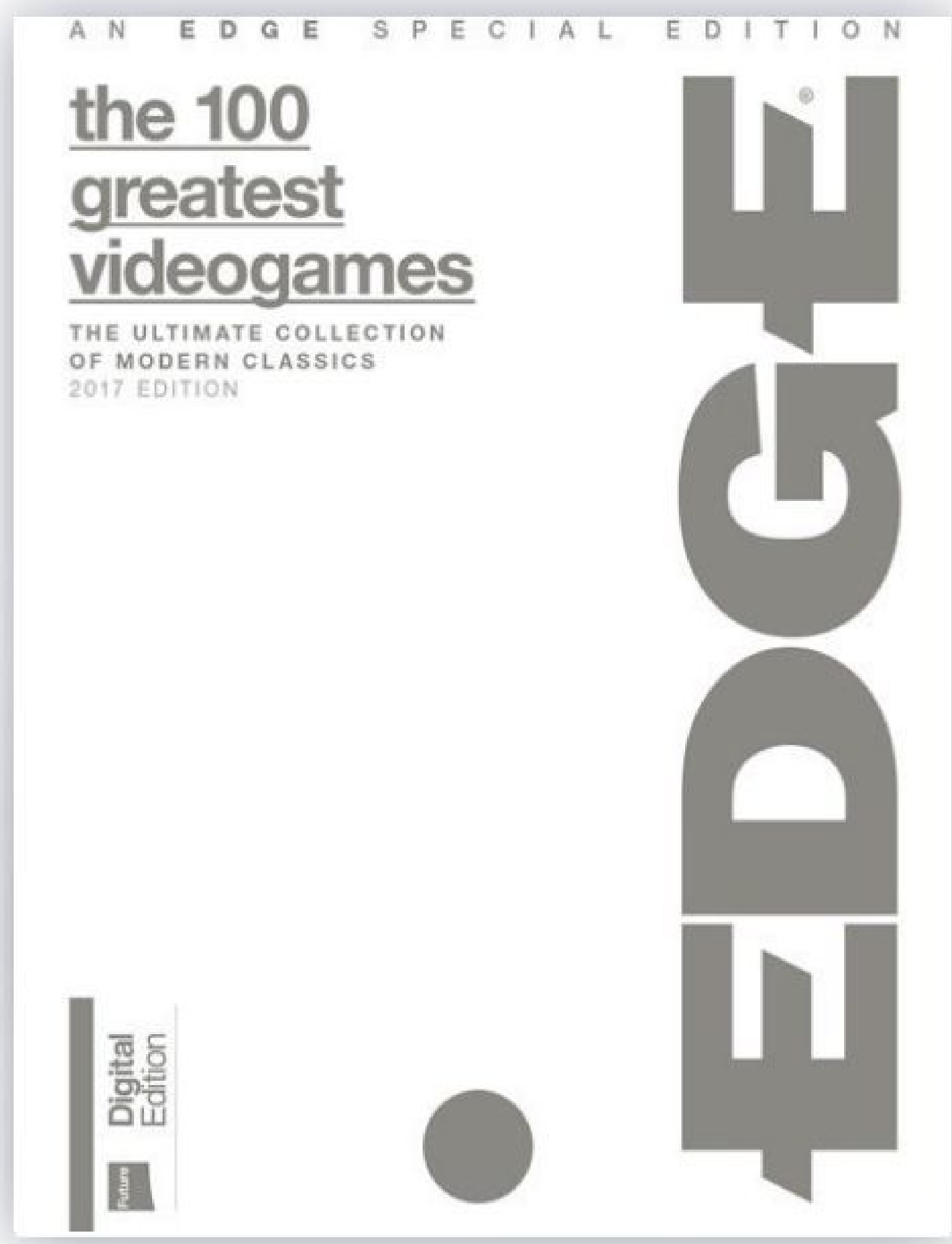
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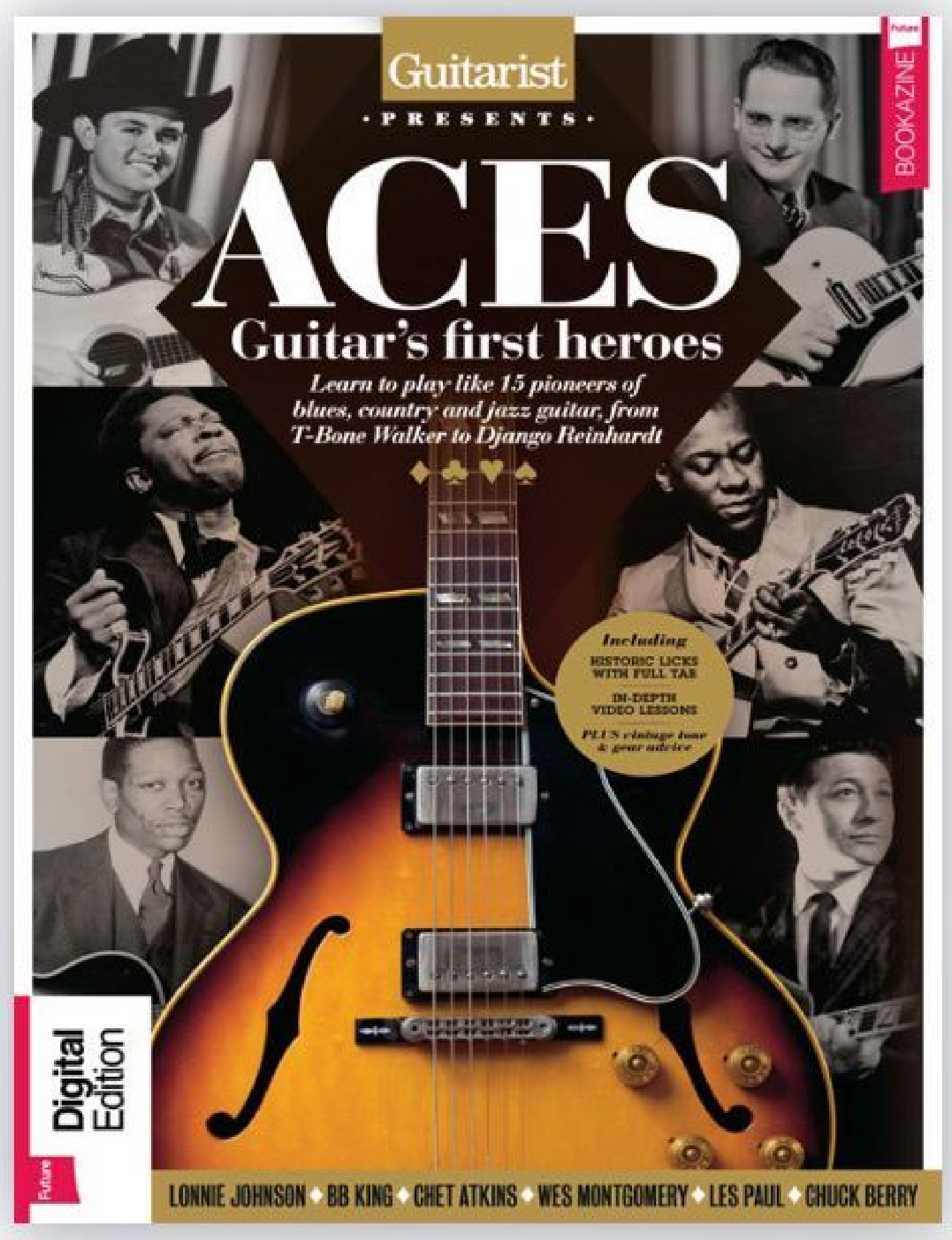
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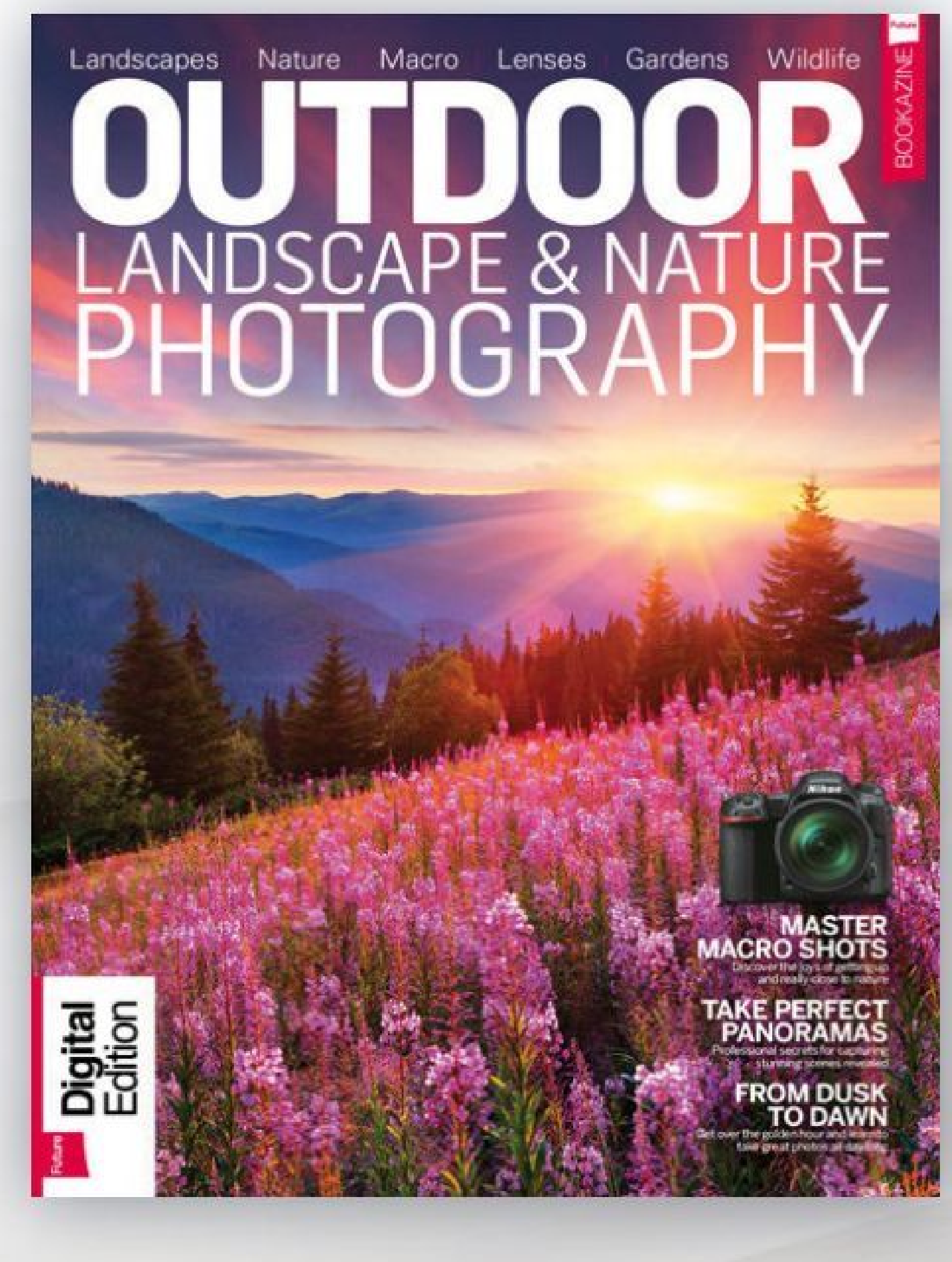
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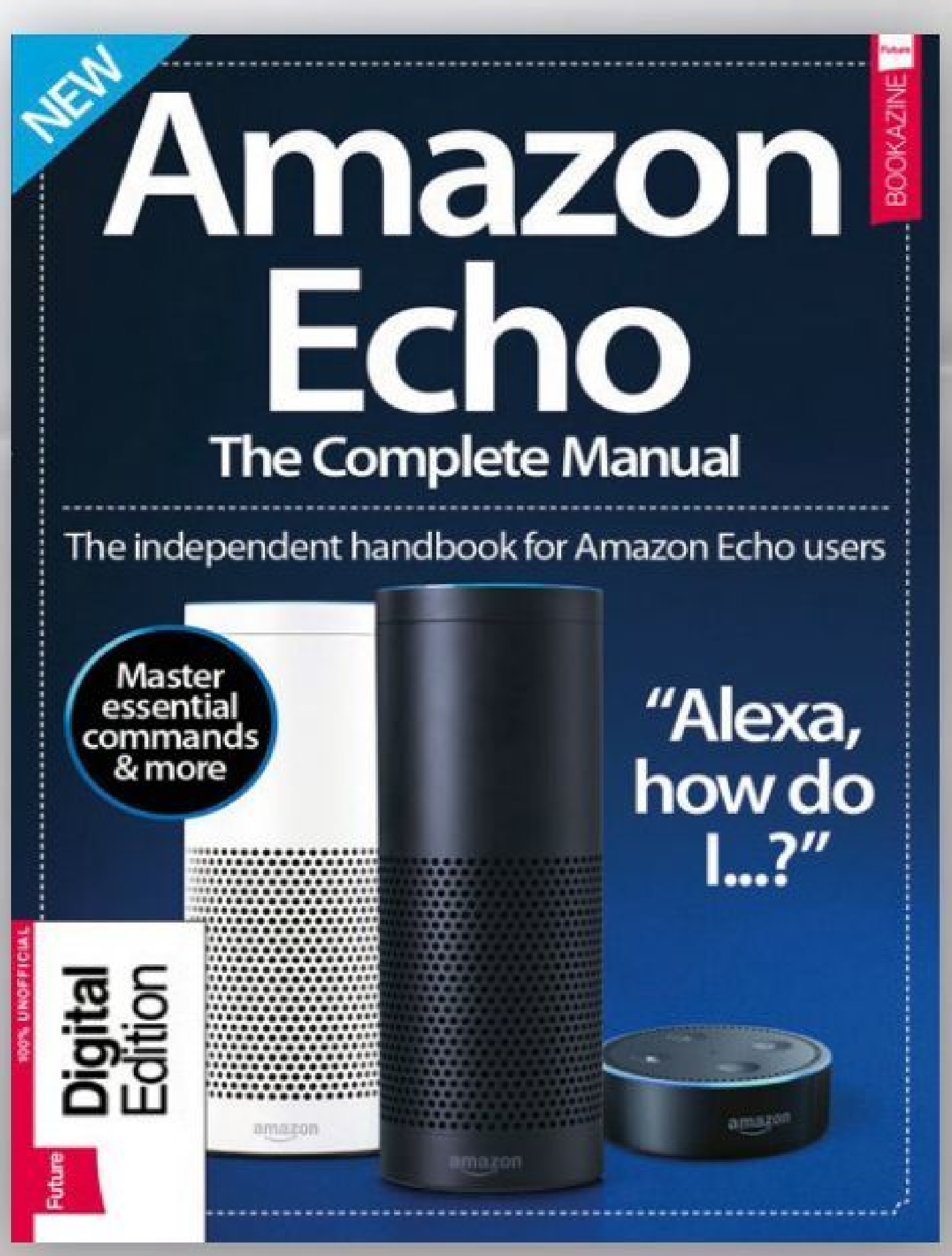
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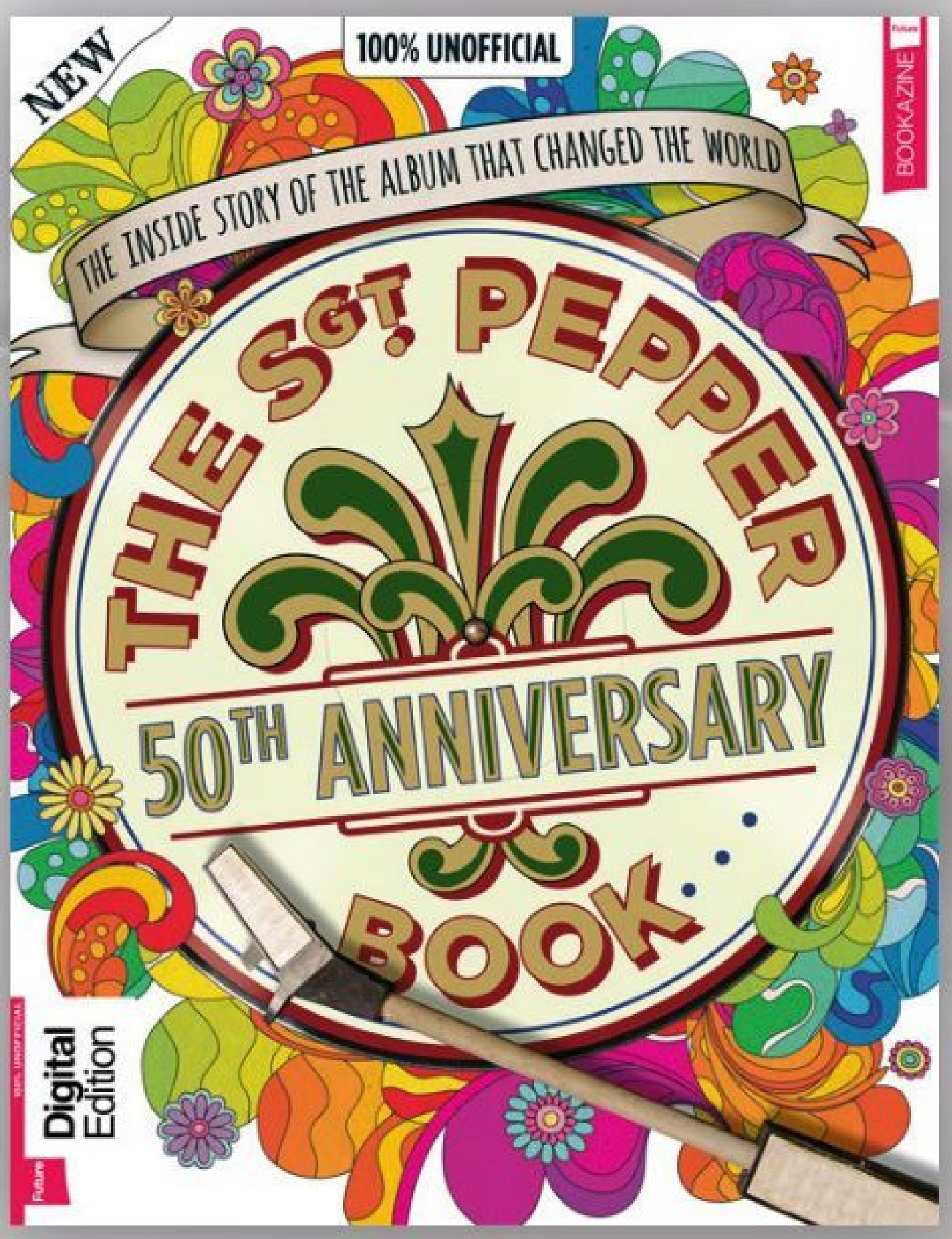
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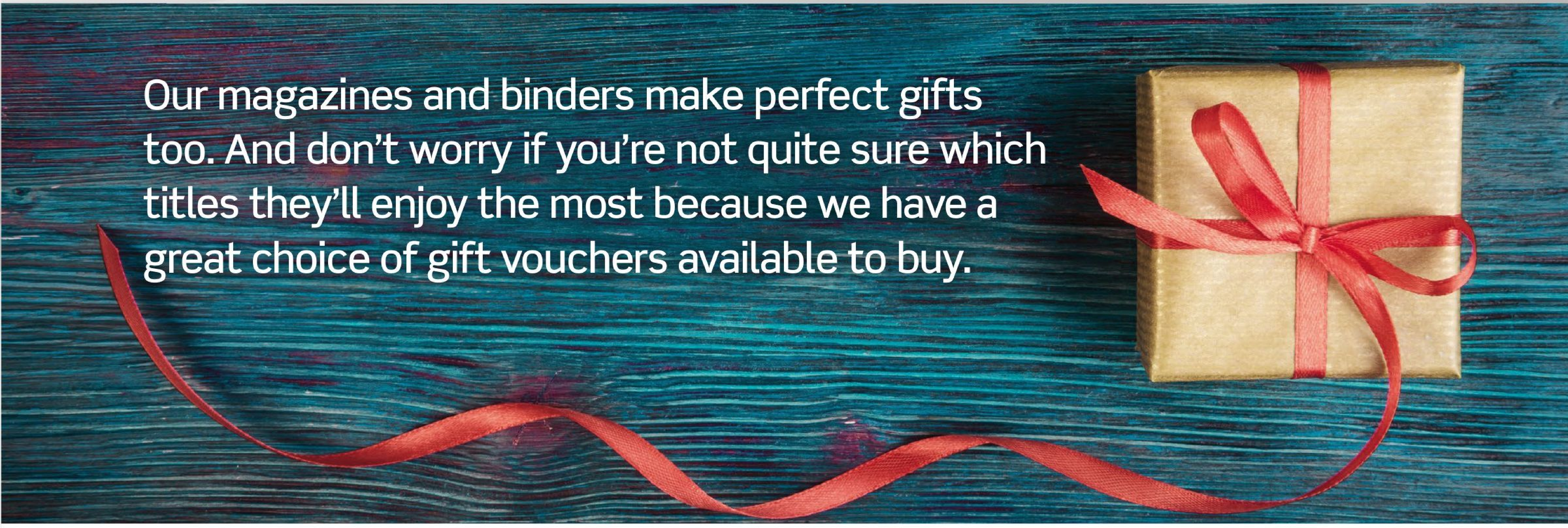

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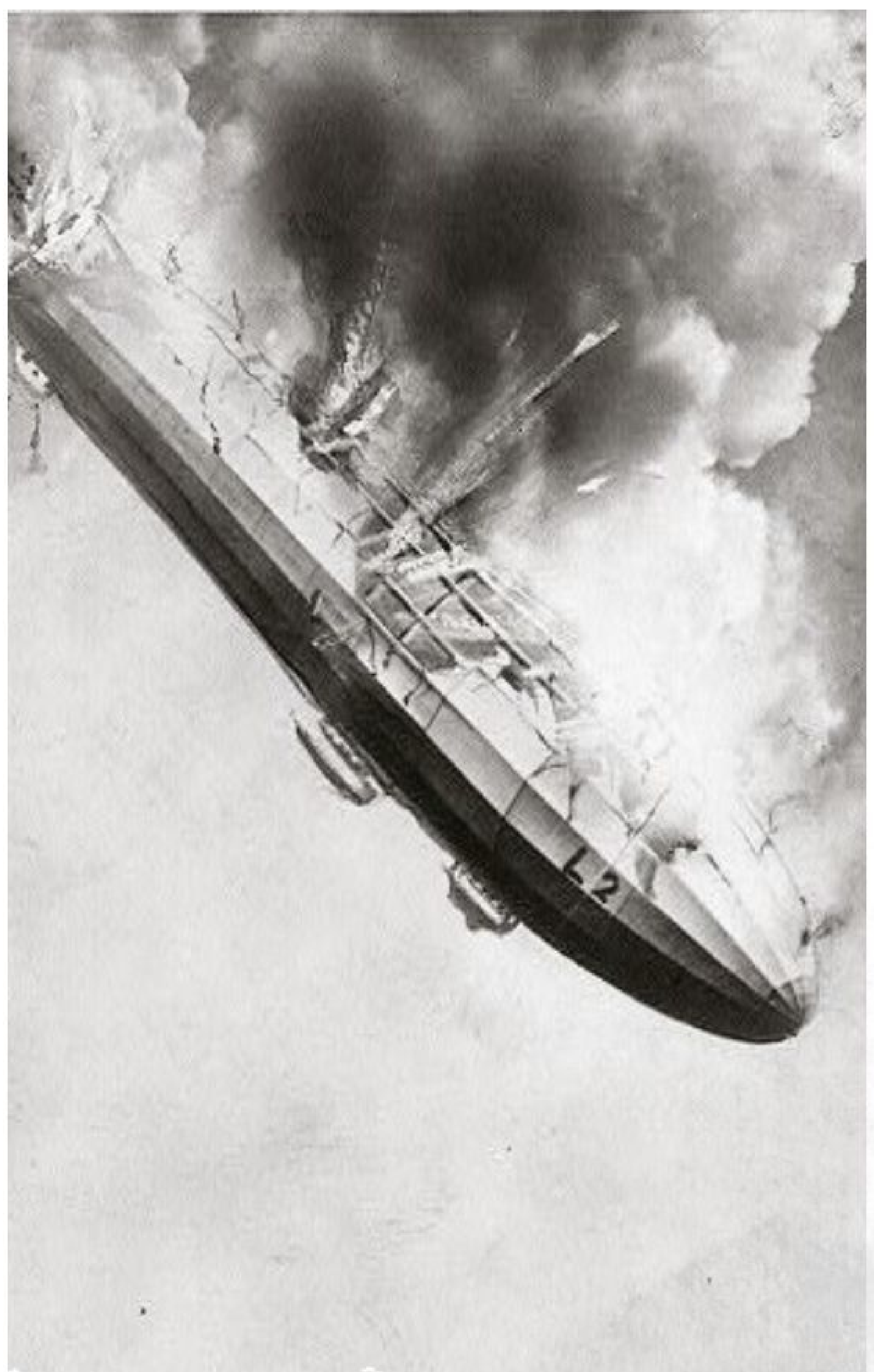

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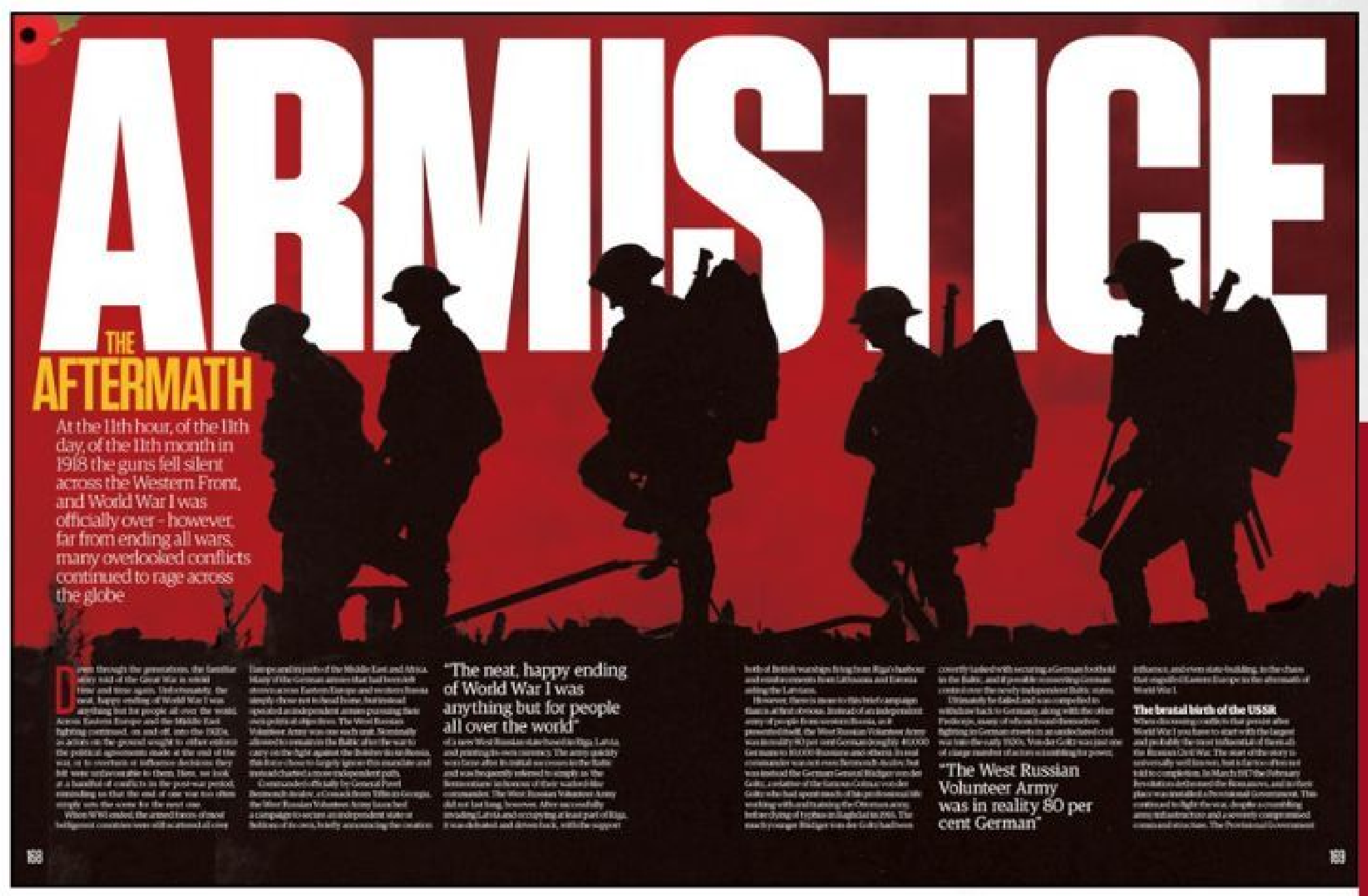

ARMISTICE

THE AFTERMATH

At the 11th hour, of the 11th day of the 11th month in 1918 the guns fell silent across the Western Front, and World War I was officially over - however, far from ending all wars, many overlooked conflicts continued to rage across the globe

"The neat, happy ending of World War I was anything but for people all over the world"

"The West Russian Volunteer Army was in reality 80 per cent German"

Aftermath & legacy

Explore how the aftermath of the war would be as shocking as the conflict itself

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